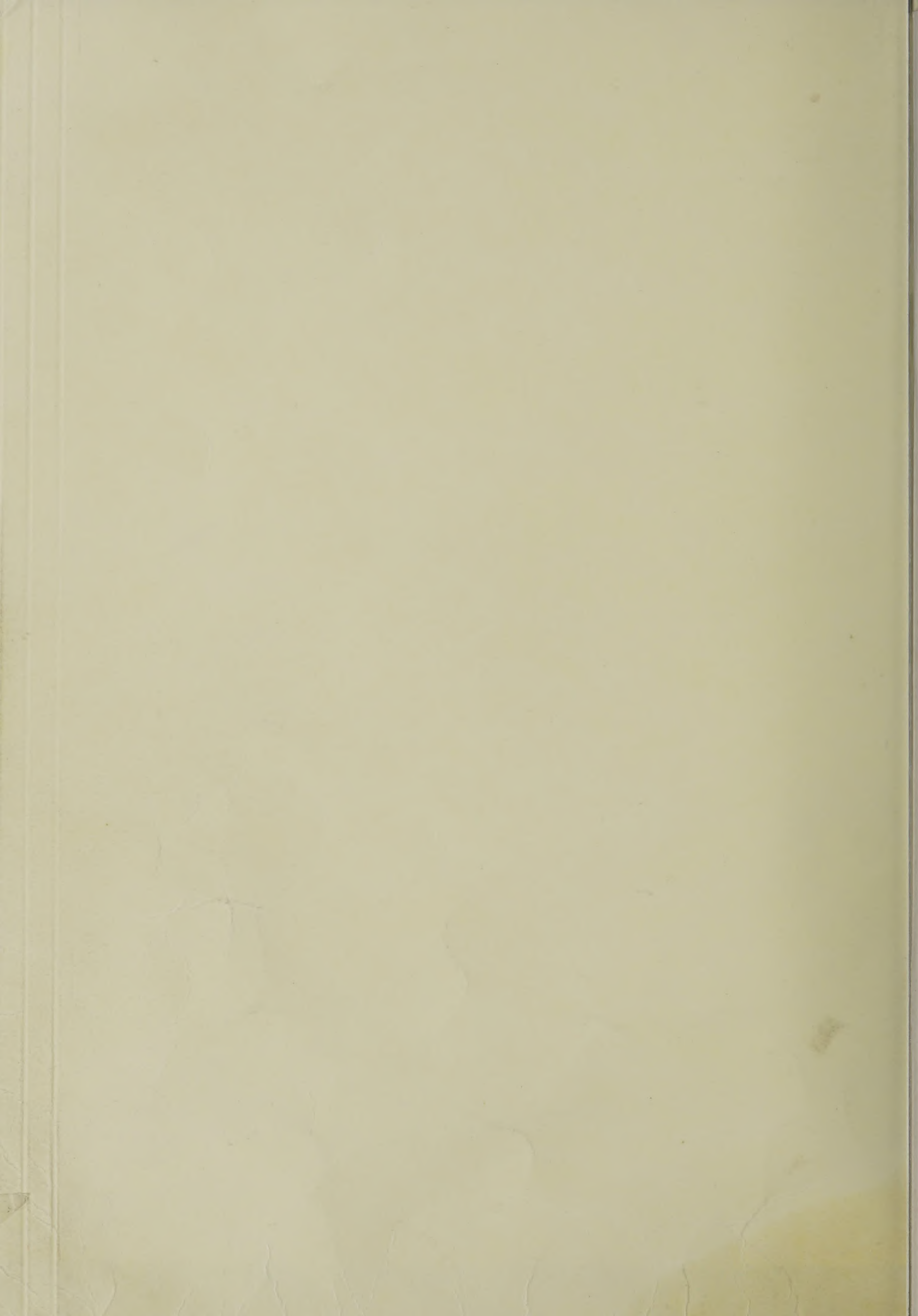


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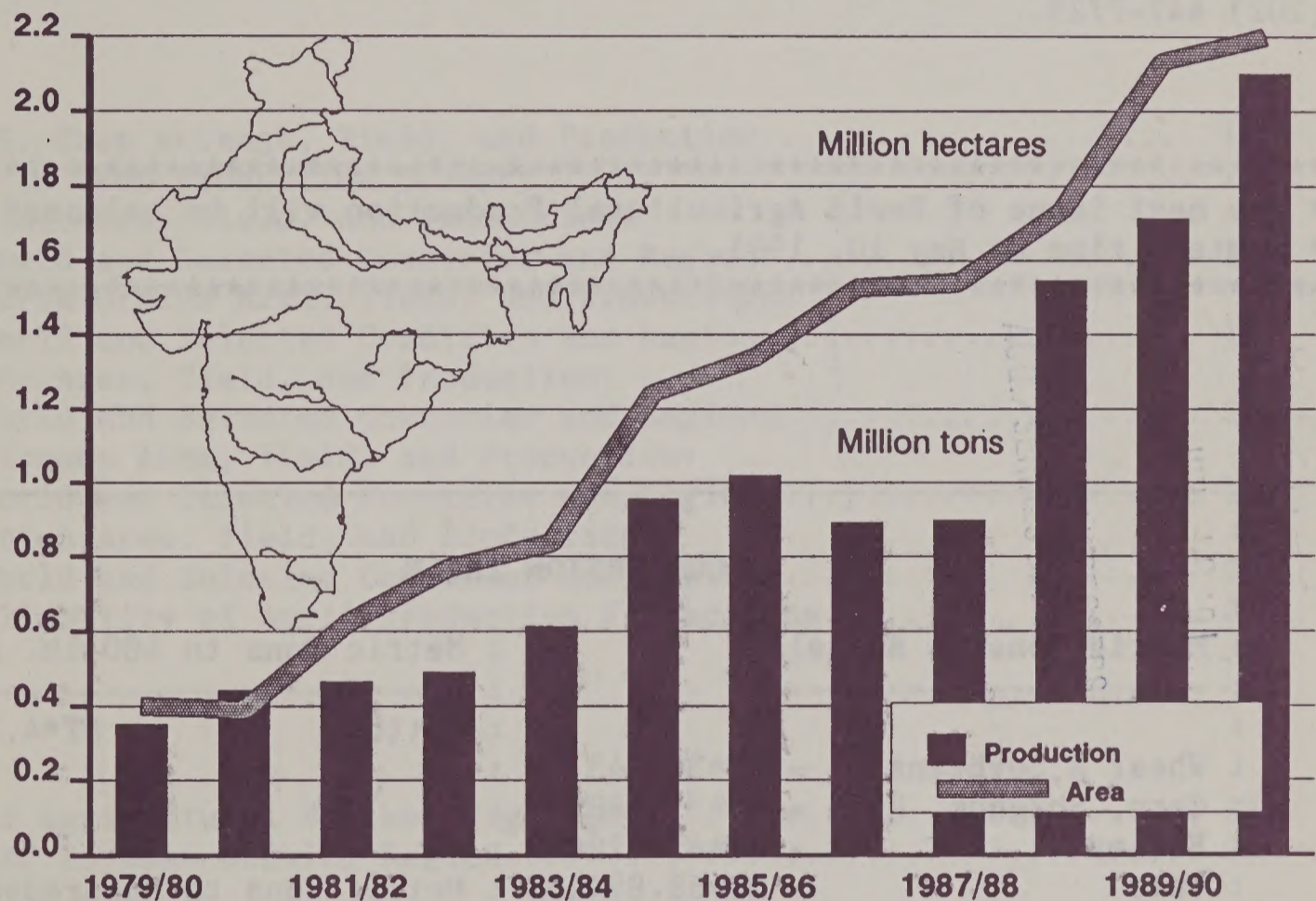
United States
Department of
Agriculture

Foreign
Agricultural
Service

Circular Series
WAP 4-91
April 1991

World Agricultural Production

India : Soybean Area and Production



Production Articles This Month...

India Soybeans

1991 Winter Grain Prospects

Argentine Summer Crops

Indonesia Livestock Sector

World Pineapple

World Flaxseed

This report draws on information from USDA's global network of agricultural attaches and counselors, official statistics of foreign governments, other foreign source materials, and results of office analysis. Estimates of U.S. acreage, yield, and production are from USDA's Agricultural Statistics Board, except where noted. Text and numbers in this report are based on unrounded data and detail may not add to totals because of rounding. This report reflects official USDA estimates released in World Agricultural Supply and Demand Estimates (WASDE-253), April 10, 1991.

This report was prepared by the Production Estimates and Crop Assessment Division (PECAD), FAS/USDA, Washington, D.C. 20250. Further information may be obtained by writing to the division or by calling (202) 382-8888 or by FAX (202) 447-7729.

 * The next issue of World Agricultural Production will be released at 3 p.m. *
 * eastern time on May 10, 1991. *

| | | | |
|-------|----------------------------------|---|------------------------------|
| ----- | | | |
| : | | | : |
| : | CONVERSION TABLE | | : |
| : | | | : |
| : | Metric Tons to Bushels | : | Metric Tons to 480-lb. Bales |
| : | ----- | : | ----- |
| : | | : | Cotton = MT*4.592917 |
| : | Wheat & Soybeans = MT*36.7437 | : | |
| : | Corn, Sorghum, Rye = MT*39.36825 | : | |
| : | Barley = MT*45.929625 | : | |
| : | Oats = MT*68.894438 | : | Metric Tons to Hundredweight |
| : | ----- | : | ----- |
| : | 1 hectare = 2.471044 acres | : | Rice = MT*22.04622 |
| : | 1 kilogram = 2.204622 pounds | : | |
| ----- | | | |

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PRODUCTION HIGHLIGHTS FOR 1990/91

April 1991

WHEAT: World production for 1990/91 is estimated at a record 590.1 million metric tons, up 1.1 million or less than 1 percent from last month and up 10 percent from last year's harvest. Foreign production is projected at a record 515.6 million tons, up 1.1 million or less than 1 percent from last month and up 7 percent from 1989/90. U.S. output is projected 74.5 million tons, unchanged from last month, but up 34 percent from 1989/90. Country highlights are as follows:

- o Eastern Europe Production is estimated at 45.2 million tons, up 0.4 million or 1 percent from last month and up 2 percent from the previous year. The increase is due to higher estimated yield in Poland.
- o Chile Production is estimated at 1.7 million tons, up 0.3 million or 20 percent from last month, but down 3 percent from last year. The increase reflects both greater estimated harvested area due to higher support prices and higher yield.
- o Egypt Production is estimated at 4.3 million tons, up 0.3 million or 7 percent from last month and up 35 percent from last year. This year marks the fourth consecutive production record for wheat. The increase is due to higher estimated area and yield.
- o Sudan Production is estimated at 0.5 million tons, up 0.2 million or 67 percent from last month and up 22 percent from last year. The increase is due to substantially higher estimated area.

COARSE GRAINS: World production for 1990/91 is estimated at 826.0 million tons, up 0.3 million or less than 1 percent from last month and up 3 percent from last year. Foreign production is estimated at a record 595.4 million tons, up 0.3 million or less than 1 percent from March and up 3 percent from last year. U.S. production is estimated at 230.6 million tons, unchanged from last month, but up 4 percent from last year. Country highlights are as follows:

- o South Africa Production is estimated at 7.4 million tons, up 0.9 million or 14 percent from last month, but down 23 percent from last year. Favorable March weather and recent estimates released by the South African Government led to higher estimated corn area and yield. Sorghum production was adjusted lower.
- o Argentina Production is estimated at 10.9 million tons, up 0.5 million or 5 percent from last month and up 32 percent from last year. Beneficial spring and summer rains have increased estimated yields for corn and sorghum. Growing conditions are reportedly the best in the last 5 years.

- o Other W. Europe Production is estimated at 13.6 million tons, up 0.3 million or 2 percent from last month and up 10 percent from last year. In Austria, higher estimated yields for barley, corn, and rye more than offset a slight fall in oats production.
- o Malawi Production is estimated at 1.6 million tons, up 0.3 million or 20 percent from last month and up 21 percent from last year. A larger estimated corn area accounts for the revision.
- o Tanzania Production is estimated at 3.2 million tons, up 0.2 million or 8 percent from last month and up 2 percent from last year. An increase in estimated corn area more than offset a fall in sorghum area.
- o Eastern Europe Production is estimated at 61.7 million tons, up 0.2 million or less than 1 percent from last month, but down 9 percent from the previous year. The increase is due to changes in Poland, where increases in rye, oats, and mixed grains more than offset decreases in corn and barley.
- o China Production is estimated at 104.0 million tons, down 0.7 million or less than 1 percent from last month, but up 11 percent from last year. Sorghum and millet production were lowered based on revised area estimates from Chinese Government sources.
- o Zimbabwe Production is estimated at 1.9 million tons, down 0.3 million or 14 percent from last month and down 15 percent from last year. Dry weather has adversely impacted estimated corn yield.
- o Brazil Production is forecast at 24.2 million tons, down 0.3 million or 1 percent from last month, but up 7 percent from last year. Mid-season frost reduced estimated barley area and yield; the expected yield for oats also experienced a reduction. Sorghum area and yield are estimated lower due to dry weather.
- o Niger Production is estimated at 1.7 million tons, down 0.2 million or 12 percent from last month, but up 5 percent from last year. Inadequate precipitation late in the growing season reduced estimated area and yields for both millet and sorghum.

o Zambia

Production is estimated at 0.9 million tons, down 0.2 million or 17 percent from last month and down 18 percent from last year. The decline is due to lower estimated corn area and yield.

RICE (MILLED-BASIS): World production for 1990/91 is estimated at a record 349.1 million tons, down 0.7 million or less than 1 percent from last month, but up 1 percent from the 1989/90 crop. Foreign production in 1990/91 is projected at a record 344.1 million tons, down 0.7 million or less than 1 percent from last month, but up 2 percent from last year. U.S. output is projected at 4.9 million tons, unchanged from last month, but down 4 percent from last season. Country highlights are as follows:

o Thailand

Production is estimated at 11.4 million tons, down 0.6 million or 5 percent from last month and down 14 percent from last year. Unfavorable weather and extensive planthopper damage caused yield to be estimated lower.

o Burma

Production is estimated at 8.2 million tons, down 0.2 million or 2 percent from last month, but up 1 percent from last year's crop. A decrease in harvested area and reduced fertilizer applications contributed to the decline in estimated production.

OILSEEDS: Total world oilseeds production during 1990/91 is forecast at 218.1 million tons, up 0.8 million from last month and up 2 percent from 1989/90. Foreign production during 1990/91 is projected to be a record 157.5 million tons, up 0.8 million from last month and up 2 percent from last year. U.S. total oilseed production is unchanged from last month at an estimated 60.6 million tons, but up 1.3 million or 2 percent from last year.

* **Soybeans:** World production for 1990/91 is estimated at 104.8 million tons, up 0.3 million from last month, but down 2 percent from last year. Total foreign soybean output is estimated at 52.5 million tons, up 0.3 million from last month, but down 4 percent from 1989/90. Country highlights are as follows:

o United States

Production is estimated at 52.3 million tons, unchanged from last month, but down slightly from last year.

o Argentina

Production is estimated at a record 11.0 million tons, up 0.7 million or 7 percent from last month and up 2 percent from last year. Beneficial spring and summer rains have increased yield potential for first and second crop soybeans.

- o China Production is estimated at 11.4 million tons, down 0.1 million or 1 percent from last month, but up 11 percent from last year. The revision is based on a 2-percent reduction in estimated area. Although soybean area declined in 1990, average yield was at a record level.
- o Paraguay Production is forecast at 1.4 million tons, down 0.2 million or 13 percent from last month and down 7 percent from last year. The decrease in production is due to inadequate and poorly distributed rainfall, which seriously reduced yield prospects in the major soybean growing region.
- * Cottonseed: World production for 1990/91 is forecast at 34.1 million tons, down marginally from last month, but up 9 percent from last year. Total foreign production is estimated at 28.5 million tons, down marginally from last month, but up 5 percent above last year. Country highlights are as follows:
 - o United States No change in USDA estimates this month. Production is estimated at 5.5 million tons, up 30 percent from last year.
- * Peanuts: World production for 1990/91 is forecast at 21.6 million tons, up 0.2 million or 1 percent from last month, but down 2 percent from last year. Total foreign production is estimated at 19.9 million tons, up 0.2 million or 1 percent from March, but down 1 percent from last year. Country highlights are as follows:
 - o United States Production is unchanged from last month at an estimated 1.6 million tons, down 10 percent from last year.
 - o China Production is estimated at 6.0 million tons, up 0.2 million or 3 percent from last month and up 12 percent from last year. Good weather throughout the growing season and excellent harvest conditions increased average yield.
- * Sunflowerseed: World production for 1990/91 is forecast at 21.8 million tons, up 0.1 million or less than 1 percent from last month, but down 1 percent from last year. Total foreign production is estimated at 20.7 million tons, up 0.1 million or 1 percent from last month, but down 2 percent from last year. Country highlights are as follows:
 - o United States Production is unchanged from last month at an estimated 1.0 million tons, up 29 percent from last year.

- o Argentina Production is estimated at 3.6 million tons, up 0.2 million or 6 percent from last month, but down 5 percent from last year. While harvested area is estimated to be below last year, excellent summer weather is expected to increase average yield to a record level.
- * Rapeseed: World production for 1990/91 is forecast at a record 25.4 million tons, up 0.5 million or 2 percent from last month and up 16 percent from last year. Country highlights are as follows:
 - o India Production is estimated at a record 5.3 million tons, up 0.5 million or 10 percent from last month and up 29 percent from last year. Harvested area and average yield is forecast at a record level. High prices at sowing boosted planted area, while ideal winter weather lead to significantly improved yield.
- * Flaxseed: World production for 1990/91 is forecast at 2.3 million tons, unchanged from last month, but up 26 percent from last year. While production by the United States is small, this year's output is expected to increase by 213 percent over last year, to 97,000 tons. Total foreign production is pegged at 2.2 million tons, unchanged from last month, but up 23 percent from last year.
- * Copra: World production for 1990/91 is forecast at 4.9 million tons, up marginally from last month and up 2 percent over last year. Copra production reached a record 5.3 million tons in 1985/86. There were no significant country changes this month.
- * Palm Kernels: World production for 1990/91 is forecast at 3.3 million tons, down 0.1 million or 4 percent from last month and down 1 percent from last year. Country highlights are as follows:
 - o Malaysia: Production is estimated at 1.8 million tons, down 0.1 million or 6 percent from last month and down 7 percent from 1989/90. The decrease is due to reduced yields caused by tree-stress following 2 years of very heavy output and below normal rainfall for most of 1989.
- * Palm Oil: World production for 1990/91 is forecast at 10.9 million tons, down 0.2 million or 2 percent from last month and down marginally from last year. Country highlights are as follows:
 - o Malaysia: Production is estimated at 6.0 million tons, down 0.2 million or 3 percent from last month and down 6 percent from last year. The decrease is attributable to the effects of tree-stress following 2 years of very heavy output and below normal rainfall during much of 1989.

COTTON: World cotton production in 1990/91 is estimated at 87.0 million bales, down 0.6 million or 1 percent from last month, but up 7.1 million bales or 9 percent from last year. Foreign production is estimated at 71.5 million bales, down 0.4 million from last month, but up 3.8 million bales or 6 percent from the 1989/90 estimate. Country highlights are as follows:

- o United States Production is estimated at 15.5 million bales, down 0.1 million or 1 percent from last month but up 27 percent from last year. Yields are forecast lower.
- o Brazil Production is forecast at 3.2 million bales, down 0.2 million or 6 percent from last month, but up 6 percent from last year. Area planted increased over last year as soybean area shifted to cotton in the center-south. The decline from last month's production estimate is a result of yield reductions caused from inadequate and poorly distributed rainfall offsetting area expansion.
- o India Production is estimated at 9.6 million bales, down 0.2 million or 2 percent from last month, and down 8 percent from last year's record crop. Yield is forecast lower due to weather problems, including drought in Gujarat and late season heavy rainfall in north and central India.
- o Pakistan Production is estimated at a record 7.5 million bales, up 0.2 million or 3 percent from last month and up 12 percent from last year. Yields are forecast significantly higher as a result of late season harvest figures that boosted overall output. Pest and disease losses were reportedly insignificant this year.
- o Paraguay Production is estimated at 1.0 million bales, down 0.3 million or 22 percent from last month, and down 3 percent from last year. Area increased over last year in response to strong 1990 producer prices. The decline from last month's production estimate is a result of weather-induced yield reductions that more than offset the expansion in area.

TABLE 1

U.S. Crop Acreage, Yield, and Production 1/

| COMMODITY | PLANTED AREA | | | HARVESTED AREA | | | YIELD | | | PRODUCTION | | |
|-------------------------------------|-------------------|---------|---------------|-------------------|---------|---------------|----------------------|---------|-------------------------|-------------------------|---------|-------------------------|
| | 1988/89 | 1989/90 | Proj. 1990/91 | 1988/89 | 1989/90 | Proj. 1990/91 | 1988/89 | 1989/90 | Mar. 1990/91 Proj. Apr. | 1988/89 | 1989/90 | Mar. 1990/91 Proj. Apr. |
| All Wheat Winter Other Rye | --Million Acres-- | | | --Million Acres-- | | | --Bushels per Acre-- | | | --Million Bushels-- | | |
| | 65.5 | 76.6 | 77.3 | 53.2 | 62.2 | 69.4 | 34.1 | 32.7 | 39.5 | 1,812 | 2,037 | 2,739 |
| | 48.8 | 55.1 | 57.0 | 39.8 | 41.5 | 50.0 | 39.2 | 35.0 | 40.7 | 1,562 | 1,455 | 2,033 |
| | 16.7 | 21.5 | 20.3 | 13.4 | 20.7 | 19.4 | 18.7 | 28.1 | 36.4 | 250 | 582 | 705 |
| | 2.4 | 2.0 | 1.6 | 0.6 | 0.5 | 0.4 | 24.7 | 28.2 | 27.1 | 15 | 14 | 10 |
| Soybeans | 58.8 | 60.8 | 57.8 | 57.4 | 59.5 | 56.5 | 27.0 | 32.3 | 34.0 | 1,549 | 1,924 | 1,922 |
| Corn | 67.7 | 72.2 | 74.2 | 58.3 | 64.7 | 67.0 | 84.6 | 116.3 | 118.5 | 4,929 | 7,525 | 7,933 |
| Sorghum | 10.3 | 12.6 | 10.5 | 9.0 | 11.1 | 9.1 | 63.8 | 55.4 | 62.9 | 577 | 615 | 571 |
| Barley | 9.8 | 9.1 | 8.2 | 7.6 | 8.3 | 7.5 | 38.0 | 48.6 | 55.9 | 290 | 404 | 419 |
| Oats | 13.9 | 12.1 | 10.4 | 5.5 | 6.9 | 5.9 | 39.3 | 54.3 | 60.1 | 218 | 374 | 357 |
| Rice | | | | | | | --Pounds per Acre-- | | | ---Million CWT.--- | | |
| | 2.9 | 2.7 | 2.9 | 2.9 | 2.7 | 2.8 | 5,514 | 5,749 | 5,507 | 159.9 | 154.5 | 154.9 |
| All Cotton | | | | | | | | | | ---Million 480-Pound--- | | |
| | 12.5 | 10.6 | 12.4 | 11.9 | 9.5 | 11.7 | 619 | 614 | 640 | 15.4 | 12.2 | 15.6 |

1/ Source: All estimates are provided by the National Agricultural Statistics Service (NASS) of the U.S. Department of Agriculture, with the exception of the April 1990/91 cotton estimate which reflects the Bureau of Census Cotton Ginnings Report released March 21, 1991.

APRIL 1991

Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 2

World Crop Production Summary

| Commodity | World | Total Foreign | North America | | | Europe | | USSR | Asia | | | | | South America | | Selected Other | | All Other Countries | | |
|---|---------|---------------|---------------|--------|--------|--------|----------------|-------|-------|-------|------------|---------------|-----------|----------------|--------|----------------|-----------------|---------------------|--------|----------------|
| | | | | | | | | | China | India | Indo-nesia | Paki- stan | Thai-land | Argen- tina | Brazil | Aus- tralia | South Africa | | Turkey | |
| | | | United States | Canada | Mexico | EC-12 | Oth. W. Europe | | | | | | | | | | | | | Eastern Europe |
| —Million Metric Tons— | | | | | | | | | | | | | | | | | | | | |
| <u>Wheat</u> 1988/89 1989/90 prel. 1990/91 proj. March April | 500.4 | 451.1 | 49.3 | 16.0 | 3.2 | 74.7 | 3.8 | 44.8 | 84.4 | 85.4 | 46.2 | 0.0 | 12.7 | 0.0 | 8.4 | 5.8 | 14.1 | 3.5 | 15.0 | 17.0 |
| | 537.0 | 481.6 | 55.4 | 24.6 | 4.0 | 78.6 | 4.4 | 44.3 | 92.3 | 90.8 | 54.1 | 0.0 | 14.4 | 0.0 | 10.2 | 5.6 | 14.1 | 2.0 | 11.5 | 15.4 |
| | 589.0 | 514.5 | 74.5 | 31.8 | 3.9 | 80.6 | 5.0 | 44.8 | 108.0 | 96.5 | 49.7 | 0.0 | 14.3 | 0.0 | 11.2 | 3.2 | 15.7 | 1.7 | 14.0 | 17.4 |
| | 590.1 | 515.6 | 74.5 | 31.8 | 3.9 | 80.6 | 5.0 | 45.2 | 108.0 | 96.5 | 49.7 | 0.0 | 14.3 | 0.0 | 11.2 | 3.1 | 15.7 | 1.7 | 14.0 | 17.9 |
| <u>Coarse Grains</u> 1988/89 1989/90 prel. 1990/91 proj. March April | 732.1 | 582.5 | 149.7 | 19.7 | 13.8 | 88.1 | 11.4 | 61.3 | 97.5 | 94.2 | 31.3 | 5.2 | 2.4 | 4.4 | 7.3 | 26.7 | 6.7 | 13.0 | 10.0 | 89.6 |
| | 800.4 | 579.0 | 221.4 | 23.5 | 14.1 | 82.3 | 12.4 | 68.1 | 104.8 | 93.5 | 34.6 | 5.0 | 2.8 | 4.3 | 8.3 | 22.5 | 6.9 | 9.6 | 7.5 | 78.9 |
| | 825.7 | 595.1 | 230.6 | 26.0 | 16.3 | 76.9 | 13.3 | 61.5 | 114.0 | 104.7 | 35.0 | 5.3 | 2.9 | 4.0 | 10.4 | 24.4 | 6.8 | 6.5 | 8.9 | 78.2 |
| | 826.0 | 595.4 | 230.6 | 26.0 | 16.3 | 76.8 | 13.6 | 61.7 | 114.0 | 104.0 | 35.0 | 5.3 | 2.9 | 4.0 | 10.9 | 24.2 | 6.8 | 7.4 | 8.9 | 77.7 |
| <u>Rice (Milled)</u> 1988/89 1989/90 1990/91 March April | 330.9 | 325.7 | 5.2 | 0.0 | 0.3 | 1.3 | 0.0 | 0.2 | 1.9 | 118.4 | 70.5 | 27.5 | 3.2 | 14.0 | 0.3 | 7.5 | 0.6 | 0.0 | 0.2 | 23.8 |
| | 344.0 | 338.9 | 5.1 | 0.0 | 0.4 | 1.4 | 0.0 | 0.2 | 1.7 | 126.1 | 74.1 | 29.1 | 3.2 | 13.3 | 0.2 | 4.9 | 0.7 | 0.0 | 0.2 | 23.3 |
| | 349.7 | 344.8 | 4.9 | 0.0 | 0.2 | 1.6 | 0.0 | 0.2 | 1.7 | 129.5 | 75.0 | 29.2 | 3.1 | 12.0 | 0.3 | 6.7 | 0.5 | 0.0 | 0.2 | 23.9 |
| | 349.1 | 344.1 | 4.9 | 0.0 | 0.2 | 1.6 | 0.0 | 0.2 | 1.7 | 129.5 | 75.0 | 29.2 | 3.1 | 11.4 | 0.3 | 6.7 | 0.5 | 0.0 | 0.2 | 24.0 |
| <u>Total Grains 1/</u> 1988/89 1989/90 prel. 1990/91 proj. March April | 1,563.5 | 1,359.3 | 204.2 | 35.7 | 17.2 | 164.1 | 15.2 | 106.3 | 183.8 | 298.0 | 148.0 | 32.7 | 18.2 | 18.5 | 16.0 | 40.0 | 21.4 | 16.6 | 25.2 | 202.6 |
| | 1,681.4 | 1,398.5 | 281.9 | 48.0 | 18.5 | 162.2 | 16.8 | 112.6 | 198.8 | 310.4 | 162.7 | 34.1 | 20.4 | 17.6 | 18.7 | 33.0 | 21.7 | 11.6 | 19.2 | 193.3 |
| | 1,764.4 | 1,454.3 | 310.0 | 57.8 | 20.4 | 159.1 | 18.3 | 106.6 | 223.7 | 330.7 | 159.6 | 34.5 | 20.3 | 16.0 | 21.9 | 34.3 | 23.0 | 8.2 | 23.1 | 196.8 |
| | 1,765.2 | 1,455.2 | 310.0 | 57.8 | 20.4 | 159.0 | 18.6 | 107.2 | 223.7 | 330.0 | 159.6 | 34.5 | 20.4 | 15.4 | 22.4 | 34.0 | 23.0 | 9.1 | 23.1 | 197.1 |
| <u>Oilseeds 2/</u> 1988/89 1989/90 prel. 1990/91 proj. March April | 203.7 | 153.4 | 50.3 | 5.9 | 1.0 | 11.5 | 0.6 | 5.1 | 13.3 | 30.6 | 19.3 | 2.0 | 3.2 | 0.8 | 10.7 | 24.6 | 0.8 | 0.8 | 2.3 | 21.0 |
| | 214.3 | 155.0 | 59.2 | 4.9 | 1.4 | 11.0 | 0.7 | 6.0 | 14.0 | 28.5 | 19.4 | 2.0 | 3.3 | 0.9 | 15.9 | 21.8 | 2.4 | 1.0 | 2.3 | 19.6 |
| | 217.3 | 156.7 | 60.6 | 5.7 | 0.9 | 12.3 | 0.8 | 5.2 | 13.4 | 33.0 | 19.5 | 2.1 | 3.6 | 0.7 | 15.1 | 18.5 | 1.0 | 1.1 | 2.1 | 21.9 |
| | 218.1 | 157.5 | 60.6 | 5.7 | 0.9 | 12.3 | 0.7 | 5.2 | 13.4 | 33.1 | 19.9 | 2.1 | 3.6 | 0.7 | 16.1 | 18.5 | 1.0 | 0.9 | 2.0 | 21.5 |
| —Million 480-Pound Bales— | | | | | | | | | | | | | | | | | | | | |
| <u>Cotton</u> 1988/89 1989/90 prel. 1990/91 proj. March April | 84.7 | 69.3 | 15.4 | 0.0 | 1.4 | 1.6 | 0.0 | 0.1 | 12.7 | 19.1 | 8.3 | 0.0 | 6.5 | 0.2 | 0.9 | 3.4 | 1.3 | 0.4 | 3.0 | 10.5 |
| | 79.9 | 67.7 | 12.2 | 0.0 | 0.8 | 1.5 | 0.0 | 0.1 | 12.3 | 17.4 | 10.4 | 0.0 | 6.7 | 0.1 | 1.3 | 3.0 | 1.4 | 0.3 | 2.8 | 9.6 |
| | 87.6 | 72.0 | 15.6 | 0.0 | 0.8 | 1.5 | 0.0 | 0.1 | 12.0 | 20.5 | 9.8 | 0.0 | 7.3 | 0.1 | 1.4 | 3.4 | 1.6 | 0.2 | 3.0 | 10.3 |
| | 87.0 | 71.5 | 15.5 | 0.0 | 0.8 | 1.5 | 0.0 | 0.1 | 12.0 | 20.5 | 9.6 | 0.0 | 7.5 | 0.1 | 1.4 | 3.2 | 1.6 | 0.2 | 3.0 | 10.1 |

1/ Includes total of wheat, coarse grains, and rice (milled) shown above. Estimates of Soviet total grain production, including wheat, coarse grains, rice (rough), minor grains and pulses are 195.1 million tons in 1988/89, 210.9 million in 1989/90, and 235.0 million forecast in 1990/91.

2/ Totals for major regions and countries include the six major oilseeds shown elsewhere in this report, while world and total foreign also include copra and palm kernels for all countries.

Note: Entries of 0.0 indicate no reported or insignificant production.

TABLE 3

Wheat Area, Yield, and Production

World and Selected Countries and Regions

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|------------------------|------------------------|------------------|------------------|-------------------------------|--------------------|---------------|---------------|---------------------------|--------------------|---------------|---------------|
| | Prel. 1988/89 | Proj. 1989/90 | Proj. 1990/91 | Prel. 1988/89 | 1990/91 1989/90 | Proj. Mar. | Proj. Apr. | Prel. 1988/89 | 1990/91 1989/90 | Proj. Mar. | Proj. Apr. |
| | ---Million Hectares--- | | | ---Metric Tons Per Hectare--- | | | | ---Million Metric Tons--- | | | |
| World | 218.0 | 225.5 | 230.3 | 2.30 | 2.38 | 2.55 | 2.56 | 500.4 | 537.0 | 589.0 | 590.1 |
| United States | 21.5 | 25.2 | 28.1 | 2.29 | 2.20 | 2.66 | 2.66 | 49.3 | 55.4 | 74.5 | 74.5 |
| Total Foreign | 196.5 | 200.3 | 202.2 | 2.30 | 2.40 | 2.54 | 2.55 | 451.1 | 481.6 | 514.5 | 515.6 |
| Maj. Foreign Exporters | 42.1 | 44.2 | 45.6 | 2.69 | 2.88 | 3.06 | 3.06 | 113.1 | 127.4 | 139.3 | 139.3 |
| Argentina | 4.7 | 5.5 | 5.9 | 1.79 | 1.86 | 1.90 | 1.90 | 8.4 | 10.2 | 11.2 | 11.2 |
| Australia | 8.9 | 8.9 | 9.9 | 1.58 | 1.58 | 1.59 | 1.59 | 14.1 | 14.1 | 15.7 | 15.7 |
| Canada | 13.0 | 13.6 | 14.1 | 1.23 | 1.80 | 2.26 | 2.26 | 16.0 | 24.6 | 31.8 | 31.8 |
| EC-12 | 15.5 | 16.2 | 15.7 | 4.82 | 4.85 | 5.12 | 5.13 | 74.7 | 78.6 | 80.6 | 80.6 |
| Major Importers | 95.9 | 97.2 | 97.3 | 2.39 | 2.50 | 2.68 | 2.71 | 229.3 | 242.5 | 263.1 | 263.7 |
| Brazil | 3.5 | 3.4 | 2.7 | 1.68 | 1.65 | 0.97 | 1.16 | 5.8 | 5.6 | 3.2 | 3.1 |
| China | 28.8 | 29.8 | 30.3 | 2.97 | 3.04 | 3.18 | 3.18 | 85.4 | 90.8 | 96.5 | 96.5 |
| Eastern Europe | 10.7 | 10.6 | 10.7 | 4.17 | 4.16 | 4.17 | 4.21 | 44.8 | 44.3 | 44.8 | 45.2 |
| Egypt | 0.6 | 0.6 | 0.7 | 4.76 | 5.05 | 5.71 | 5.79 | 2.8 | 3.2 | 4.0 | 4.3 |
| Other N. Africa 1/ | 4.0 | 4.7 | 5.1 | 1.26 | 1.13 | 1.08 | 1.11 | 5.0 | 5.3 | 5.6 | 5.6 |
| Japan | 0.3 | 0.3 | 0.3 | 3.62 | 3.47 | 3.66 | 3.66 | 1.0 | 1.0 | 1.0 | 1.0 |
| USSR | 48.1 | 47.7 | 47.5 | 1.76 | 1.94 | 2.27 | 2.27 | 84.4 | 92.3 | 108.0 | 108.0 |
| Other Foreign | 58.5 | 58.9 | 59.3 | 1.86 | 1.90 | 1.89 | 1.90 | 108.6 | 111.7 | 112.0 | 112.5 |
| India | 23.1 | 24.1 | 23.5 | 2.00 | 2.24 | 2.12 | 2.12 | 46.2 | 54.1 | 49.7 | 49.7 |
| Iran | 6.6 | 6.0 | 6.1 | 1.11 | 0.97 | 1.00 | 1.00 | 7.3 | 5.8 | 6.1 | 6.1 |
| Mexico | 0.8 | 1.0 | 0.9 | 4.00 | 4.21 | 4.59 | 4.59 | 3.2 | 4.0 | 3.9 | 3.9 |
| Non-EC W. Europe | 0.8 | 0.8 | 0.9 | 4.85 | 5.19 | 5.46 | 5.40 | 3.8 | 4.4 | 5.0 | 5.0 |
| Pakistan | 7.3 | 7.7 | 7.8 | 1.73 | 1.87 | 1.84 | 1.84 | 12.7 | 14.4 | 14.3 | 14.3 |
| South Africa | 2.0 | 1.8 | 1.7 | 1.78 | 1.11 | 1.00 | 1.00 | 3.5 | 2.0 | 1.7 | 1.7 |
| Turkey | 8.8 | 8.7 | 8.8 | 1.71 | 1.32 | 1.60 | 1.60 | 15.0 | 11.5 | 14.0 | 14.0 |
| Others | 9.3 | 8.8 | 9.8 | 1.83 | 1.76 | 1.81 | 1.83 | 17.0 | 15.4 | 17.4 | 17.9 |

1/ Algeria, Libya, Morocco, and Tunisia.

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Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 4
Coarse Grains Area, Yield, and Production
World and Selected Countries and Regions

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|----------------------------|------------------------|------------------|---------|-------------------------------|--------------------------|------|------|---------------------------|--------------------------|-------|-------|
| | Prel. 1988/89 | Proj. 1989/90 | 1990/91 | Prel. 1988/89 | 1990/91 Proj. 1989/90 | Mar. | Apr. | Prel. 1988/89 | 1990/91 Proj. 1989/90 | Mar. | Apr. |
| TOTAL COARSE GRAINS | ---Million Hectares--- | | | ---Metric Tons Per Hectare--- | | | | ---Million Metric Tons--- | | | |
| World 1/ | 326.1 | 321.0 | 320.1 | 2.24 | 2.49 | 2.57 | 2.58 | 732.1 | 800.4 | 825.7 | 826.0 |
| United States | 32.8 | 37.0 | 36.4 | 4.56 | 5.98 | 6.34 | 6.34 | 149.7 | 221.4 | 230.6 | 230.6 |
| Total Foreign | 293.3 | 283.9 | 283.7 | 1.99 | 2.04 | 2.08 | 2.10 | 582.5 | 579.0 | 595.1 | 595.4 |
| Maj. Foreign Exporters | 20.7 | 21.3 | 20.9 | 2.47 | 2.47 | 2.61 | 2.64 | 51.1 | 52.6 | 53.6 | 55.1 |
| Argentina | 2.9 | 3.1 | 3.4 | 2.49 | 2.65 | 3.07 | 3.18 | 7.3 | 8.3 | 10.4 | 10.9 |
| Australia | 4.3 | 4.0 | 4.2 | 1.56 | 1.71 | 1.60 | 1.60 | 6.7 | 6.9 | 6.8 | 6.8 |
| Canada | 7.1 | 8.3 | 8.0 | 2.76 | 2.84 | 3.24 | 3.24 | 19.7 | 23.5 | 26.0 | 26.0 |
| South Africa | 4.6 | 4.4 | 3.6 | 2.86 | 2.20 | 1.88 | 2.04 | 13.0 | 9.6 | 6.5 | 7.4 |
| Thailand | 1.8 | 1.6 | 1.5 | 2.50 | 2.78 | 2.67 | 2.58 | 4.4 | 4.3 | 4.0 | 4.0 |
| Major Importers | 106.3 | 103.7 | 101.3 | 2.57 | 2.73 | 2.80 | 2.80 | 273.5 | 283.0 | 283.5 | 283.8 |
| Eastern Europe | 18.2 | 18.1 | 17.9 | 3.37 | 3.76 | 3.43 | 3.44 | 61.3 | 68.1 | 61.5 | 61.7 |
| EC-12 | 19.2 | 18.6 | 17.6 | 4.60 | 4.43 | 4.35 | 4.37 | 88.1 | 82.3 | 76.9 | 76.8 |
| Other W. Europe | 3.2 | 3.1 | 3.0 | 3.52 | 3.97 | 4.40 | 4.46 | 11.4 | 12.4 | 13.3 | 13.6 |
| Mexico | 7.5 | 7.5 | 8.3 | 1.85 | 1.88 | 1.96 | 1.96 | 13.8 | 14.1 | 16.3 | 16.3 |
| USSR | 57.8 | 56.0 | 54.0 | 1.69 | 1.87 | 2.11 | 2.11 | 97.5 | 104.8 | 114.0 | 114.0 |
| Other Major Import. 2/ | 0.5 | 0.4 | 0.4 | 3.40 | 3.35 | 3.31 | 3.31 | 1.5 | 1.4 | 1.4 | 1.4 |
| Other Foreign | 166.3 | 158.9 | 161.6 | 1.55 | 1.53 | 1.58 | 1.59 | 257.9 | 243.3 | 258.0 | 256.6 |
| Brazil | 13.4 | 12.5 | 13.5 | 2.00 | 1.79 | 1.80 | 1.79 | 26.7 | 22.5 | 24.4 | 24.2 |
| China | 28.3 | 28.2 | 28.7 | 3.33 | 3.31 | 3.59 | 3.62 | 94.2 | 93.5 | 104.7 | 104.0 |
| India | 38.7 | 37.7 | 38.9 | 0.81 | 0.92 | 0.90 | 0.90 | 31.3 | 34.6 | 35.0 | 35.0 |
| Indonesia | 2.9 | 2.7 | 2.9 | 1.82 | 1.85 | 1.83 | 1.83 | 5.2 | 5.0 | 5.3 | 5.3 |
| Nigeria | 10.1 | 9.9 | 9.7 | 0.84 | 0.82 | 0.78 | 0.78 | 8.5 | 8.1 | 7.6 | 7.6 |
| Philippines | 3.8 | 3.6 | 3.8 | 1.21 | 1.24 | 1.24 | 1.24 | 4.5 | 4.5 | 4.7 | 4.7 |
| Turkey | 4.4 | 4.4 | 4.5 | 2.29 | 1.70 | 1.99 | 1.99 | 10.0 | 7.5 | 8.9 | 8.9 |
| Others | 64.9 | 59.7 | 59.7 | 1.19 | 1.13 | 1.10 | 1.12 | 77.4 | 67.7 | 67.4 | 66.9 |
| BARLEY | | | | | | | | | | | |
| World | 78.2 | 74.8 | 73.2 | 2.15 | 2.27 | 2.43 | 2.48 | 167.8 | 169.6 | 181.5 | 181.5 |
| United States | 3.1 | 3.4 | 3.0 | 2.04 | 2.62 | 3.00 | 3.00 | 6.3 | 8.8 | 9.1 | 9.1 |
| Total Foreign | 75.1 | 71.5 | 70.1 | 2.15 | 2.25 | 2.41 | 2.46 | 161.5 | 160.8 | 172.4 | 172.4 |
| Australia | 2.2 | 2.4 | 2.5 | 1.48 | 1.73 | 1.59 | 1.59 | 3.3 | 4.1 | 4.0 | 4.0 |
| Canada | 4.2 | 4.7 | 4.6 | 2.46 | 2.50 | 2.93 | 2.93 | 10.2 | 11.7 | 13.5 | 13.5 |
| China | 3.7 | 3.3 | 3.3 | 1.67 | 1.74 | 1.73 | 1.73 | 6.2 | 5.7 | 5.7 | 5.7 |
| Eastern Europe | 4.5 | 4.5 | 4.5 | 3.78 | 4.31 | 4.33 | 4.35 | 17.1 | 19.3 | 19.6 | 19.7 |
| EC-12 | 12.2 | 11.7 | 11.4 | 4.13 | 3.95 | 4.03 | 4.05 | 50.2 | 46.4 | 46.0 | 46.0 |
| Other W. Europe | 1.7 | 1.5 | 1.5 | 3.28 | 3.87 | 4.26 | 4.31 | 5.7 | 5.9 | 6.2 | 6.3 |
| Turkey | 3.3 | 3.4 | 3.4 | 2.12 | 1.46 | 1.76 | 1.76 | 7.0 | 4.9 | 6.0 | 6.0 |
| USSR | 29.7 | 27.6 | 26.0 | 1.50 | 1.75 | 2.19 | 2.19 | 44.5 | 48.5 | 57.0 | 57.0 |
| Others | 13.5 | 12.4 | 13.0 | 1.28 | 1.16 | 0.99 | 1.10 | 17.3 | 14.4 | 14.3 | 14.2 |

FOOTNOTES AT END OF TABLE

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Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 4
Coarse Grains Area, Yield, and Production
World and Selected Countries and Regions -- Continued

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|------------------------|------------------------|------------------|------------------|-------------------------------|--------------------|---------------|---------------|---------------------------|--------------------|---------------|---------------|
| | Prel. 1988/89 | Proj. 1989/90 | Proj. 1990/91 | Prel. 1988/89 | 1990/91 1989/90 | Proj. Mar. | Proj. Apr. | Prel. 1988/89 | 1990/91 1989/90 | Proj. Mar. | Proj. Apr. |
| <u>CORN</u> | ---Million Hectares--- | | | ---Metric Tons Per Hectare--- | | | | ---Million Metric Tons--- | | | |
| World | 125.8 | 126.1 | 128.2 | 3.20 | 3.66 | 3.69 | 3.68 | 401.9 | 461.2 | 470.7 | 472.0 |
| United States | 23.6 | 26.2 | 27.1 | 5.31 | 7.30 | 7.44 | 7.44 | 125.2 | 191.2 | 201.5 | 201.5 |
| Total Foreign | 102.2 | 99.9 | 101.1 | 2.71 | 2.70 | 2.68 | 2.68 | 276.7 | 270.1 | 269.1 | 270.5 |
| Maj. Foreign Exporters | 7.1 | 6.7 | 6.4 | 3.05 | 2.72 | 2.77 | 2.87 | 21.6 | 18.2 | 16.9 | 18.2 |
| Argentina | 1.7 | 1.7 | 2.0 | 2.94 | 3.06 | 3.60 | 3.75 | 5.0 | 5.2 | 7.2 | 7.5 |
| South Africa | 3.8 | 3.6 | 3.0 | 3.28 | 2.47 | 2.14 | 2.33 | 12.4 | 8.9 | 6.0 | 7.0 |
| Thailand | 1.6 | 1.4 | 1.4 | 2.63 | 2.93 | 2.85 | 2.74 | 4.2 | 4.1 | 3.7 | 3.7 |
| Major Importers | 22.0 | 21.2 | 21.2 | 3.82 | 3.95 | 3.42 | 3.42 | 83.9 | 83.8 | 72.3 | 72.4 |
| Eastern Europe | 7.1 | 7.1 | 6.8 | 3.78 | 4.21 | 3.33 | 3.33 | 26.9 | 29.8 | 22.7 | 22.6 |
| EC-12 | 4.1 | 3.9 | 3.4 | 7.00 | 6.91 | 6.27 | 6.26 | 28.5 | 26.8 | 21.6 | 21.6 |
| Other W. Europe | 0.2 | 0.2 | 0.2 | 8.55 | 7.68 | 7.43 | 7.91 | 1.9 | 1.7 | 1.6 | 1.8 |
| Mexico | 6.0 | 5.8 | 6.6 | 1.68 | 1.68 | 1.82 | 1.82 | 10.1 | 9.8 | 12.0 | 12.0 |
| USSR | 4.4 | 4.1 | 4.0 | 3.62 | 3.71 | 3.50 | 3.50 | 16.0 | 15.3 | 14.0 | 14.0 |
| Other Maj. Import. 2/ | 0.1 | 0.1 | 0.1 | 4.20 | 4.19 | 4.14 | 4.14 | 0.4 | 0.5 | 0.5 | 0.5 |
| Other Foreign | 73.1 | 72.0 | 73.6 | 2.34 | 2.33 | 2.46 | 2.44 | 171.2 | 168.1 | 179.9 | 179.9 |
| Brazil | 12.9 | 12.1 | 13.0 | 2.02 | 1.80 | 1.81 | 1.81 | 26.1 | 21.8 | 23.5 | 23.5 |
| Canada | 1.0 | 1.0 | 1.0 | 5.47 | 6.36 | 7.00 | 7.00 | 5.4 | 6.4 | 7.0 | 7.0 |
| China | 19.7 | 20.4 | 21.0 | 3.93 | 3.88 | 4.19 | 4.19 | 77.4 | 78.9 | 88.0 | 88.0 |
| Egypt | 0.8 | 0.8 | 0.8 | 5.20 | 5.37 | 5.43 | 5.43 | 4.3 | 4.5 | 4.6 | 4.6 |
| India | 5.9 | 5.9 | 5.9 | 1.40 | 1.61 | 1.61 | 1.61 | 8.2 | 9.4 | 9.5 | 9.5 |
| Indonesia | 2.9 | 2.7 | 2.9 | 1.82 | 1.85 | 1.83 | 1.83 | 5.2 | 5.0 | 5.3 | 5.3 |
| Philippines | 3.8 | 3.6 | 3.8 | 1.21 | 1.24 | 1.24 | 1.24 | 4.5 | 4.5 | 4.7 | 4.7 |
| Zimbabwe | 1.2 | 1.2 | 1.1 | 1.56 | 1.69 | 1.81 | 1.52 | 1.9 | 1.9 | 1.9 | 1.6 |
| Others | 25.0 | 24.4 | 24.1 | 1.53 | 1.46 | 1.49 | 1.48 | 38.2 | 35.6 | 35.4 | 35.7 |
| <u>SORGHUM</u> | | | | | | | | | | | |
| World | 42.0 | 40.6 | 39.6 | 1.31 | 1.35 | 1.36 | 1.35 | 55.0 | 54.9 | 54.4 | 53.6 |
| United States | 3.7 | 4.5 | 3.7 | 4.00 | 3.48 | 3.95 | 3.95 | 14.6 | 15.6 | 14.5 | 14.5 |
| Total Foreign | 38.3 | 36.1 | 35.9 | 1.05 | 1.09 | 1.10 | 1.09 | 40.3 | 39.2 | 39.9 | 39.1 |
| Argentina | 0.6 | 0.7 | 0.8 | 2.33 | 2.86 | 3.29 | 3.33 | 1.4 | 2.0 | 2.3 | 2.5 |
| Australia | 0.6 | 0.4 | 0.5 | 1.99 | 2.27 | 2.00 | 1.99 | 1.3 | 0.9 | 0.9 | 0.9 |
| China | 1.8 | 1.6 | 1.6 | 3.14 | 2.72 | 3.22 | 3.35 | 5.6 | 4.4 | 5.8 | 5.2 |
| India | 14.6 | 14.9 | 15.0 | 0.70 | 0.86 | 0.83 | 0.83 | 10.2 | 12.9 | 12.5 | 12.5 |
| Mexico | 1.1 | 1.3 | 1.3 | 2.83 | 2.88 | 2.85 | 2.85 | 3.1 | 3.8 | 3.7 | 3.7 |
| Nigeria | 4.4 | 4.4 | 4.4 | 0.80 | 0.80 | 0.75 | 0.75 | 3.5 | 3.5 | 3.3 | 3.3 |
| South Africa | 0.3 | 0.2 | 0.1 | 1.58 | 1.47 | 1.30 | 0.78 | 0.4 | 0.4 | 0.2 | 0.1 |
| Sudan | 5.3 | 3.1 | 3.0 | 0.83 | 0.52 | 0.50 | 0.50 | 4.4 | 1.6 | 1.5 | 1.5 |
| Thailand | 0.2 | 0.2 | 0.2 | 1.35 | 1.44 | 1.39 | 1.39 | 0.2 | 0.2 | 0.3 | 0.3 |
| Others | 9.5 | 9.2 | 9.1 | 1.08 | 1.04 | 1.01 | 1.00 | 10.2 | 9.5 | 9.5 | 9.1 |

FOOTNOTES AT END OF TABLE

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TABLE 4
Coarse Grains Area, Yield, and Production
World and Selected Countries and Regions -- Continued

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|------------------------|------------------------|------------------|---------|-------------------------------|-----------------|-----------------|------|---------------------------|-----------------|-----------------|------|
| | Prel. 1988/89 | Proj. 1989/90 | 1990/91 | Prel. 1988/89 | 1990/91 Mar. | 1990/91 Apr. | | Prel. 1988/89 | 1990/91 Mar. | 1990/91 Apr. | |
| OATS | ---Million Hectares--- | | | ---Metric Tons Per Hectare--- | | | | ---Million Metric Tons--- | | | |
| World | 22.1 | 22.7 | 21.6 | 1.70 | 1.84 | 1.99 | 1.99 | 37.5 | 41.8 | 42.9 | 42.8 |
| United States | 2.2 | 2.8 | 2.4 | 1.41 | 1.95 | 2.16 | 2.16 | 3.2 | 5.4 | 5.2 | 5.2 |
| Total Foreign | 19.9 | 19.9 | 19.2 | 1.73 | 1.83 | 1.97 | 1.97 | 34.3 | 36.4 | 37.7 | 37.7 |
| USSR | 10.9 | 10.8 | 10.5 | 1.40 | 1.57 | 1.67 | 1.67 | 15.3 | 16.8 | 17.5 | 17.5 |
| Maj. Foreign Exporters | 3.5 | 3.7 | 3.5 | 1.91 | 1.97 | 2.12 | 2.12 | 6.6 | 7.3 | 7.4 | 7.4 |
| Argentina | 0.4 | 0.4 | 0.5 | 1.27 | 1.44 | 1.33 | 1.33 | 0.5 | 0.6 | 0.6 | 0.6 |
| Australia | 1.3 | 1.1 | 1.2 | 1.40 | 1.44 | 1.42 | 1.42 | 1.9 | 1.6 | 1.7 | 1.6 |
| Canada | 1.4 | 1.7 | 1.5 | 2.18 | 2.08 | 2.33 | 2.33 | 3.0 | 3.5 | 3.5 | 3.5 |
| Sweden | 0.4 | 0.4 | 0.4 | 3.14 | 3.54 | 4.51 | 4.51 | 1.3 | 1.5 | 1.6 | 1.6 |
| Other Foreign | 5.4 | 5.5 | 5.2 | 2.28 | 2.25 | 2.46 | 2.46 | 12.4 | 12.3 | 12.9 | 12.8 |
| China | 0.6 | 0.6 | 0.6 | 1.19 | 1.20 | 1.21 | 1.21 | 0.7 | 0.7 | 0.7 | 0.7 |
| Eastern Europe | 1.4 | 1.4 | 1.3 | 2.63 | 2.67 | 2.90 | 2.93 | 3.7 | 3.6 | 3.7 | 3.8 |
| East Germany | 0.1 | 0.1 | 0.1 | 3.43 | 3.33 | 4.14 | 4.14 | 0.5 | 0.5 | 0.6 | 0.6 |
| Poland | 0.9 | 0.8 | 0.7 | 2.61 | 2.72 | 2.78 | 2.84 | 2.2 | 2.2 | 2.1 | 2.1 |
| EC-12 | 1.8 | 1.7 | 1.5 | 3.11 | 2.77 | 3.09 | 3.12 | 5.5 | 4.7 | 4.8 | 4.7 |
| France | 0.3 | 0.3 | 0.2 | 3.77 | 3.73 | 3.80 | 3.86 | 1.0 | 1.0 | 0.9 | 0.9 |
| West Germany | 0.6 | 0.5 | 0.5 | 4.23 | 3.78 | 4.37 | 4.59 | 2.4 | 1.9 | 2.1 | 2.1 |
| Finland | 0.4 | 0.4 | 0.5 | 2.21 | 3.24 | 3.67 | 3.67 | 0.9 | 1.4 | 1.7 | 1.7 |
| Norway | 0.1 | 0.1 | 0.1 | 3.02 | 3.13 | 4.58 | 4.58 | 0.4 | 0.4 | 0.6 | 0.6 |
| Others | 1.2 | 1.3 | 1.2 | 1.09 | 1.12 | 1.11 | 1.08 | 1.3 | 1.4 | 1.4 | 1.4 |
| RYE | | | | | | | | | | | |
| World | 15.9 | 16.9 | 16.8 | 2.08 | 2.22 | 2.31 | 2.31 | 33.0 | 37.6 | 38.8 | 38.9 |
| United States | 0.2 | 0.2 | 0.2 | 1.55 | 1.77 | 1.70 | 1.70 | 0.4 | 0.3 | 0.3 | 0.3 |
| Total Foreign | 15.6 | 16.7 | 16.7 | 2.09 | 2.23 | 2.32 | 2.32 | 32.6 | 37.3 | 38.6 | 38.6 |
| USSR | 10.1 | 10.7 | 10.5 | 1.83 | 1.87 | 2.00 | 2.00 | 18.5 | 20.1 | 21.0 | 21.0 |
| Maj. Foreign Exporter | | | | | | | | | | | |
| Canada | 0.3 | 0.5 | 0.5 | 1.04 | 1.74 | 1.74 | 1.74 | 0.3 | 0.9 | 0.9 | 0.9 |
| Other Foreign | | | | | | | | | | | |
| Eastern Europe | 3.9 | 3.9 | 4.1 | 2.59 | 2.99 | 2.91 | 2.92 | 10.0 | 11.8 | 11.9 | 12.0 |
| East Germany | 0.6 | 0.6 | 0.6 | 2.94 | 3.34 | 3.19 | 3.19 | 1.8 | 2.1 | 2.1 | 2.1 |
| Poland | 2.9 | 2.9 | 3.1 | 2.52 | 2.95 | 2.84 | 2.86 | 7.2 | 8.6 | 8.7 | 8.8 |
| Czechoslovakia | 0.2 | 0.2 | 0.2 | 3.42 | 4.05 | 4.26 | 4.26 | 0.5 | 0.7 | 0.7 | 0.7 |
| EC-12 | 0.9 | 1.0 | 1.0 | 3.05 | 3.32 | 3.46 | 3.47 | 2.9 | 3.2 | 3.3 | 3.3 |
| Denmark | 0.1 | 0.1 | 0.1 | 4.52 | 4.80 | 4.90 | 4.90 | 0.4 | 0.5 | 0.5 | 0.5 |
| West Germany | 0.4 | 0.4 | 0.4 | 4.19 | 4.69 | 4.72 | 4.72 | 1.6 | 1.8 | 2.0 | 2.0 |
| Others | 0.5 | 0.6 | 0.6 | 2.06 | 2.29 | 2.51 | 2.50 | 1.0 | 1.3 | 1.4 | 1.4 |

1/ Total of barley, corn, sorghum, oats, and rye shown below, plus millet and mixed grain.

2/ Japan, Republic of Korea, and Taiwan.

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TABLE 5

Rice Area, Yield, and Production World and Selected Countries and Regions

| | AREA | | YIELD | | | | PRODUCTION (Rough Basis) | | | | MILLING RATE | | | | PRODUCTION (Milled Basis) | | | |
|------------------------|--------------------|---------------|---------------------------|---------|---------------|--------------------|-----------------------------|---------|---------------|--------------------|--------------------|---------|---------------|--------------------|------------------------------|-------|-------|-------|
| | 1988/89 | Prel. 1989/90 | Proj. 1990/91 | 1988/89 | Prel. 1989/90 | 1990/91 Proj. Mar. | 1990/91 Proj. Apr. | 1988/89 | Prel. 1989/90 | 1990/91 Proj. Mar. | 1990/91 Proj. Apr. | 1988/89 | Prel. 1989/90 | 1990/91 Proj. Mar. | 1990/91 Proj. Apr. | | | |
| | —Million Hectares— | | —Metric Tons Per Hectare— | | | | —Million Metric Tons— | | | | —In Percent— | | | | —Million Metric Tons— | | | |
| World | 145.5 | 146.5 | 146.8 | 3.4 | 3.5 | 3.5 | 3.5 | 488.9 | 508.2 | 516.8 | 515.7 | 67.7 | 67.7 | 67.7 | 67.7 | 330.9 | 344.0 | 349.1 |
| United States | 1.2 | 1.1 | 1.1 | 6.2 | 6.4 | 6.2 | 6.2 | 7.3 | 7.0 | 7.0 | 7.0 | 71.5 | 73.0 | 70.0 | 70.0 | 5.2 | 5.1 | 4.9 |
| Total Foreign | 144.3 | 145.4 | 145.7 | 3.3 | 3.4 | 3.5 | 3.5 | 481.7 | 501.2 | 509.7 | 508.7 | 67.6 | 67.6 | 67.6 | 67.5 | 325.7 | 338.9 | 344.1 |
| Maj. Foreign Exporters | 16.5 | 16.8 | 16.5 | 2.3 | 2.3 | 2.2 | 2.2 | 38.6 | 38.5 | 36.9 | 35.7 | 64.1 | 64.0 | 63.8 | 63.8 | 24.7 | 24.6 | 23.5 |
| Burma | 4.5 | 4.7 | 4.8 | 2.8 | 2.9 | 2.9 | 2.9 | 12.5 | 13.5 | 14.0 | 13.7 | 60.0 | 60.0 | 60.0 | 60.0 | 7.5 | 8.1 | 8.2 |
| Pakistan | 2.0 | 2.1 | 2.0 | 2.4 | 2.3 | 2.3 | 2.3 | 4.8 | 4.8 | 4.7 | 4.7 | 66.7 | 66.7 | 66.7 | 66.7 | 3.2 | 3.2 | 3.1 |
| Thailand | 9.9 | 10.0 | 9.7 | 2.1 | 2.0 | 1.9 | 1.8 | 21.3 | 20.2 | 18.2 | 17.3 | 66.0 | 66.0 | 66.0 | 66.0 | 14.0 | 13.3 | 12.0 |
| Major Importers | 13.0 | 13.8 | 13.7 | 4.3 | 4.2 | 4.3 | 4.3 | 55.8 | 58.3 | 58.5 | 58.5 | 66.1 | 66.0 | 66.0 | 66.0 | 36.9 | 38.5 | 38.6 |
| EC-12 | 0.3 | 0.3 | 0.4 | 5.6 | 6.2 | 6.3 | 6.4 | 2.0 | 2.1 | 2.3 | 2.4 | 67.3 | 67.0 | 67.3 | 67.3 | 1.3 | 1.4 | 1.6 |
| Indonesia | 9.8 | 10.5 | 10.3 | 4.3 | 4.2 | 4.4 | 4.4 | 42.3 | 44.7 | 45.0 | 45.0 | 65.0 | 65.0 | 65.0 | 65.0 | 27.5 | 29.1 | 29.2 |
| Nigeria | 0.6 | 0.6 | 0.7 | 1.3 | 1.4 | 1.4 | 1.4 | 0.8 | 0.9 | 0.9 | 0.9 | 60.0 | 60.0 | 60.0 | 60.0 | 0.5 | 0.5 | 0.5 |
| Republic of Korea | 1.3 | 1.3 | 1.2 | 6.6 | 6.5 | 6.3 | 6.3 | 8.4 | 8.2 | 7.8 | 7.8 | 72.3 | 72.0 | 72.0 | 72.0 | 6.1 | 5.9 | 5.6 |
| Other Maj. Import. 1/ | 1.0 | 1.0 | 1.1 | 2.3 | 2.4 | 2.3 | 2.3 | 2.3 | 2.5 | 2.5 | 2.5 | 65.4 | 65.5 | 65.5 | 65.5 | 1.5 | 1.6 | 1.6 |
| Other Foreign | 114.8 | 114.8 | 115.6 | 3.4 | 3.5 | 3.6 | 3.6 | 387.3 | 404.3 | 414.4 | 414.5 | 68.2 | 68.2 | 68.2 | 68.2 | 264.1 | 275.8 | 282.8 |
| Australia | 0.1 | 0.1 | 0.1 | 8.2 | 8.0 | 8.1 | 8.1 | 0.8 | 0.9 | 0.7 | 0.7 | 71.5 | 71.5 | 71.5 | 71.5 | 0.6 | 0.7 | 0.5 |
| Bangladesh | 10.2 | 10.5 | 10.6 | 2.3 | 2.6 | 2.6 | 2.6 | 23.3 | 27.0 | 27.2 | 27.2 | 66.7 | 66.7 | 66.7 | 66.7 | 15.6 | 18.0 | 18.1 |
| Brazil | 5.3 | 4.3 | 4.8 | 2.1 | 1.7 | 2.0 | 2.0 | 11.0 | 7.2 | 9.8 | 9.8 | 68.0 | 68.0 | 68.0 | 68.0 | 7.5 | 4.9 | 6.7 |
| China | 31.9 | 32.7 | 32.7 | 5.3 | 5.5 | 5.7 | 5.7 | 169.1 | 180.1 | 185.0 | 185.0 | 70.0 | 70.0 | 70.0 | 70.0 | 118.4 | 126.1 | 129.5 |
| India | 41.7 | 42.2 | 42.2 | 2.5 | 2.6 | 2.7 | 2.7 | 105.7 | 111.1 | 112.5 | 112.5 | 66.7 | 66.7 | 66.7 | 66.7 | 70.5 | 74.1 | 75.0 |
| Japan | 2.1 | 2.1 | 2.1 | 5.9 | 6.2 | 6.3 | 6.3 | 12.4 | 12.9 | 13.1 | 13.1 | 72.8 | 72.8 | 72.8 | 72.8 | 9.0 | 9.4 | 9.6 |
| Philippines | 3.5 | 3.4 | 3.5 | 2.6 | 2.6 | 2.7 | 2.7 | 9.2 | 8.9 | 9.4 | 9.4 | 65.0 | 65.0 | 65.0 | 65.0 | 6.0 | 5.8 | 6.1 |
| USSR | 0.7 | 0.7 | 0.7 | 4.3 | 3.9 | 4.0 | 4.0 | 2.9 | 2.6 | 2.6 | 2.6 | 65.0 | 65.0 | 65.0 | 65.0 | 1.9 | 1.7 | 1.7 |
| Vietnam | 5.8 | 5.9 | 5.9 | 2.9 | 3.1 | 3.1 | 3.1 | 16.8 | 18.4 | 18.0 | 18.0 | 65.0 | 65.0 | 65.0 | 65.0 | 10.9 | 12.0 | 11.7 |
| Others | 13.5 | 12.9 | 13.2 | 2.7 | 2.7 | 2.7 | 2.8 | 36.0 | 35.2 | 36.1 | 36.2 | 66.1 | 66.1 | 66.1 | 66.1 | 23.8 | 23.3 | 24.0 |

1/ Hong Kong, Iran, Iraq, Ivory Coast, and Saudi Arabia.

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Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 6
Oilseeds Area, Yield, and Production
World and Selected Countries and Regions

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|------------------------|------------------------|---------|---------|-------------------------------|---------|-------|------|---------------------------|---------|--------|--------|
| | Prel. | Proj. | | Prel. | 1990/91 | Proj. | | Prel. | 1990/91 | Proj. | |
| | 1988/89 | 1989/90 | 1990/91 | 1988/89 | 1989/90 | Mar. | Apr. | 1988/89 | 1989/90 | Mar. | Apr. |
| | ---Million Hectares--- | | | ---Metric Tons Per Hectare--- | | | | ---Million Metric Tons--- | | | |
| <u>SOYBEANS</u> | | | | | | | | | | | |
| World | 55.87 | 58.04 | 54.54 | 1.71 | 1.85 | 1.91 | 1.92 | 95.55 | 107.12 | 104.53 | 104.80 |
| United States | 23.22 | 24.09 | 22.87 | 1.82 | 2.17 | 2.29 | 2.29 | 42.15 | 52.35 | 52.30 | 52.30 |
| Total Foreign | 32.65 | 33.94 | 31.67 | 1.64 | 1.61 | 1.64 | 1.66 | 53.40 | 54.76 | 52.23 | 52.49 |
| Maj. Foreign Exporters | 16.17 | 16.35 | 14.70 | 1.84 | 1.90 | 1.84 | 1.90 | 29.70 | 31.09 | 27.30 | 28.00 |
| Argentina | 4.00 | 4.95 | 4.80 | 1.63 | 2.17 | 2.10 | 2.29 | 6.50 | 10.75 | 10.30 | 11.00 |
| Brazil | 12.17 | 11.40 | 9.90 | 1.91 | 1.78 | 1.72 | 1.72 | 23.20 | 20.34 | 17.00 | 17.00 |
| Other Foreign | 16.48 | 17.59 | 16.97 | 1.44 | 1.35 | 1.46 | 1.44 | 23.70 | 23.67 | 24.93 | 24.49 |
| Canada | 0.53 | 0.54 | 0.50 | 2.16 | 2.26 | 2.63 | 2.63 | 1.15 | 1.22 | 1.33 | 1.33 |
| China | 8.12 | 8.06 | 7.50 | 1.43 | 1.27 | 1.51 | 1.52 | 11.65 | 10.23 | 11.50 | 11.40 |
| Eastern Europe | 0.56 | 0.54 | 0.54 | 1.20 | 1.51 | 1.31 | 1.31 | 0.67 | 0.82 | 0.71 | 0.71 |
| EC-12 | 0.53 | 0.61 | 0.66 | 3.10 | 3.19 | 2.82 | 2.82 | 1.66 | 1.95 | 1.85 | 1.85 |
| India | 1.73 | 2.13 | 2.20 | 0.89 | 0.80 | 0.95 | 0.95 | 1.55 | 1.72 | 2.10 | 2.10 |
| Indonesia | 1.18 | 1.15 | 1.25 | 1.02 | 0.96 | 0.96 | 0.96 | 1.20 | 1.10 | 1.20 | 1.20 |
| Paraguay | 0.85 | 0.98 | 0.98 | 1.90 | 1.53 | 1.63 | 1.43 | 1.62 | 1.50 | 1.60 | 1.40 |
| USSR | 0.76 | 0.83 | 0.84 | 1.16 | 1.15 | 1.10 | 1.10 | 0.88 | 0.96 | 0.92 | 0.92 |
| Others | 2.21 | 2.75 | 2.50 | 1.51 | 1.52 | 1.48 | 1.43 | 3.33 | 4.19 | 3.72 | 3.58 |
| <u>COTTONSEED</u> | | | | | | | | | | | |
| World | 33.75 | 32.37 | 33.94 | 0.98 | 0.97 | 1.01 | 1.00 | 32.99 | 31.32 | 34.14 | 34.05 |
| United States | 4.84 | 3.86 | 4.74 | 1.14 | 1.10 | 1.17 | 1.17 | 5.50 | 4.24 | 5.52 | 5.52 |
| Total Foreign | 28.92 | 28.51 | 29.20 | 0.95 | 0.95 | 0.98 | 0.98 | 27.49 | 27.08 | 28.62 | 28.53 |
| China | 5.53 | 5.20 | 5.53 | 1.27 | 1.24 | 1.38 | 1.37 | 7.05 | 6.44 | 7.58 | 7.60 |
| India | 7.34 | 7.33 | 7.70 | 0.49 | 0.62 | 0.55 | 0.54 | 3.60 | 4.54 | 4.27 | 4.18 |
| Pakistan | 2.51 | 2.60 | 2.74 | 1.14 | 1.12 | 1.16 | 1.16 | 2.85 | 2.91 | 3.18 | 3.18 |
| USSR | 3.43 | 3.34 | 3.15 | 1.61 | 1.59 | 1.67 | 1.67 | 5.54 | 5.32 | 5.25 | 5.25 |
| Others | 10.10 | 10.04 | 10.08 | 0.84 | 0.78 | 0.83 | 0.83 | 8.44 | 7.87 | 8.35 | 8.33 |
| <u>PEANUTS</u> | | | | | | | | | | | |
| World | 19.81 | 19.65 | 19.37 | 1.17 | 1.12 | 1.10 | 1.11 | 23.18 | 21.93 | 21.40 | 21.58 |
| United States | 0.66 | 0.67 | 0.73 | 2.74 | 2.72 | 2.24 | 2.23 | 1.81 | 1.81 | 1.63 | 1.63 |
| Total Foreign | 19.15 | 18.98 | 18.64 | 1.12 | 1.06 | 1.06 | 1.07 | 21.37 | 20.12 | 19.77 | 19.94 |
| Argentina | 0.15 | 0.18 | 0.20 | 1.62 | 2.06 | 2.32 | 2.37 | 0.24 | 0.37 | 0.43 | 0.48 |
| China | 2.91 | 2.96 | 2.96 | 1.95 | 1.81 | 1.90 | 2.03 | 5.69 | 5.37 | 5.80 | 6.00 |
| India | 8.53 | 8.71 | 8.10 | 1.06 | 0.93 | 0.90 | 0.90 | 9.00 | 8.09 | 7.30 | 7.30 |
| Senegal | 0.90 | 0.78 | 0.92 | 0.76 | 1.04 | 0.73 | 0.73 | 0.69 | 0.82 | 0.67 | 0.67 |
| South Africa | 0.15 | 0.09 | 0.09 | 1.07 | 1.35 | 1.40 | 1.05 | 0.16 | 0.12 | 0.12 | 0.09 |
| Sudan | 0.58 | 0.55 | 0.54 | 0.78 | 0.73 | 0.60 | 0.60 | 0.45 | 0.40 | 0.33 | 0.33 |
| Others | 5.92 | 5.71 | 5.84 | 0.87 | 0.87 | 0.88 | 0.87 | 5.13 | 4.97 | 5.12 | 5.08 |

TABLE 6
Oilseeds Area, Yield, and Production
World and Selected Countries and Regions -- Continued

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|-----------------------|------------------------|---------|---------|-------------------------------|---------|---------------|------|---------------------------|---------|---------------|--------|
| | Prel. | | Proj. | Prel. | | 1990/91 Proj. | | Prel. | | 1990/91 Proj. | |
| | 1988/89 | 1989/90 | 1990/91 | 1988/89 | 1989/90 | Mar. | Apr. | 1988/89 | 1989/90 | Mar. | Apr. |
| <u>SUNFLOWERSEED</u> | ---Million Hectares--- | | | ---Metric Tons Per Hectare--- | | | | ---Million Metric Tons--- | | | |
| World | 14.95 | 15.91 | 15.90 | 1.36 | 1.39 | 1.34 | 1.37 | 20.37 | 22.04 | 21.67 | 21.77 |
| United States | 0.78 | 0.72 | 0.75 | 1.05 | 1.10 | 1.38 | 1.38 | 0.81 | 0.80 | 1.03 | 1.03 |
| Total Foreign | 14.18 | 15.18 | 15.15 | 1.38 | 1.40 | 1.34 | 1.37 | 19.56 | 21.24 | 20.64 | 20.74 |
| Argentina | 2.20 | 2.80 | 2.30 | 1.45 | 1.36 | 1.42 | 1.57 | 3.20 | 3.80 | 3.40 | 3.60 |
| China | 0.83 | 0.72 | 0.70 | 1.42 | 1.49 | 1.45 | 1.71 | 1.18 | 1.06 | 1.20 | 1.20 |
| EC-12 | 2.16 | 2.11 | 2.55 | 1.84 | 1.66 | 1.60 | 1.60 | 3.99 | 3.50 | 4.08 | 4.08 |
| East Europe | 1.31 | 1.29 | 1.29 | 1.62 | 1.87 | 1.69 | 1.69 | 2.13 | 2.42 | 2.18 | 2.18 |
| USSR | 4.28 | 4.46 | 4.62 | 1.45 | 1.59 | 1.41 | 1.41 | 6.20 | 7.10 | 6.50 | 6.50 |
| Others | 3.39 | 3.81 | 3.69 | 0.84 | 0.88 | 0.88 | 0.86 | 2.87 | 3.36 | 3.28 | 3.18 |
| <u>RAPESEED</u> | | | | | | | | | | | |
| World | 17.85 | 17.18 | 18.47 | 1.27 | 1.27 | 1.39 | 1.38 | 22.71 | 21.88 | 24.93 | 25.40 |
| Total Foreign | 17.85 | 17.18 | 18.47 | 1.27 | 1.27 | 1.39 | 1.38 | 22.71 | 21.88 | 24.93 | 25.40 |
| Canada | 3.67 | 2.90 | 2.63 | 1.17 | 1.07 | 1.26 | 1.26 | 4.31 | 3.10 | 3.33 | 3.33 |
| China | 4.94 | 4.99 | 5.49 | 1.02 | 1.09 | 1.31 | 1.26 | 5.04 | 5.44 | 6.93 | 6.93 |
| EC-12 | 1.84 | 1.66 | 1.97 | 2.81 | 2.96 | 2.92 | 2.92 | 5.17 | 4.92 | 5.73 | 5.73 |
| East Europe | 0.88 | 1.00 | 0.94 | 2.51 | 2.64 | 2.38 | 2.38 | 2.20 | 2.64 | 2.25 | 2.25 |
| India | 4.83 | 4.99 | 5.60 | 0.91 | 0.83 | 0.92 | 0.95 | 4.38 | 4.12 | 4.80 | 5.30 |
| Others | 1.69 | 1.63 | 1.84 | 0.95 | 1.02 | 1.03 | 1.01 | 1.61 | 1.67 | 1.90 | 1.87 |
| <u>FLAXSEED</u> | | | | | | | | | | | |
| World | 3.70 | 3.65 | 3.76 | 0.45 | 0.51 | 0.62 | 0.62 | 1.67 | 1.85 | 2.33 | 2.33 |
| United States | 0.09 | 0.07 | 0.10 | 0.45 | 0.47 | 0.95 | 0.95 | 0.04 | 0.03 | 0.10 | 0.10 |
| Total Foreign | 3.61 | 3.59 | 3.66 | 0.45 | 0.51 | 0.61 | 0.61 | 1.63 | 1.82 | 2.23 | 2.23 |
| Argentina | 0.54 | 0.58 | 0.58 | 0.86 | 0.90 | 0.83 | 0.83 | 0.46 | 0.52 | 0.48 | 0.48 |
| Canada | 0.50 | 0.60 | 0.73 | 0.74 | 0.83 | 1.29 | 1.29 | 0.37 | 0.50 | 0.94 | 0.94 |
| India | 1.20 | 1.18 | 1.20 | 0.30 | 0.29 | 0.33 | 0.33 | 0.36 | 0.34 | 0.40 | 0.40 |
| USSR | 1.04 | 0.87 | 0.78 | 0.21 | 0.26 | 0.21 | 0.21 | 0.22 | 0.23 | 0.17 | 0.17 |
| Others | 0.33 | 0.36 | 0.37 | 0.66 | 0.66 | 0.68 | 0.68 | 0.22 | 0.24 | 0.25 | 0.25 |
| <u>MAJOR OILSEEDS</u> | 145.92 | 146.78 | 145.98 | 1.35 | 1.40 | 1.43 | 1.44 | 196.47 | 206.14 | 209.00 | 209.93 |
| United States | 29.58 | 29.41 | 29.19 | 1.70 | 2.01 | 2.08 | 2.08 | 50.31 | 59.24 | 60.59 | 60.59 |
| Total Foreign | 116.34 | 117.37 | 116.79 | 1.26 | 1.25 | 1.27 | 1.28 | 146.16 | 146.91 | 148.42 | 149.34 |
| <u>COPRA</u> | -- | -- | -- | -- | -- | -- | -- | 4.28 | 4.79 | 4.89 | 4.91 |
| <u>PALM KERNEL</u> | -- | -- | -- | -- | -- | -- | -- | 2.94 | 3.34 | 3.42 | 3.30 |
| <u>TOTAL OILSEEDS</u> | -- | -- | -- | -- | -- | -- | -- | 203.69 | 214.27 | 217.31 | 218.13 |
| <u>PALM OIL 1/</u> | -- | -- | -- | -- | -- | -- | -- | 9.57 | 10.92 | 11.09 | 10.89 |

1/ Not included in total oilseeds.

TABLE 7

Cotton Area, Yield, and Production **World and Selected Countries and Regions**

| COUNTRY/REGION | AREA | | | YIELD | | | | PRODUCTION | | | |
|------------------------|------------------------|------------------|------------------|-----------------------------|--------------------|---------------|---------------|-------------------------------|--------------------|---------------|---------------|
| | Prel. 1988/89 | Proj. 1989/90 | Proj. 1990/91 | Prel. 1988/89 | 1990/91 1989/90 | Proj. Mar. | Proj. Apr. | Prel. 1988/89 | 1990/91 1989/90 | Proj. Mar. | Proj. Apr. |
| | ---Million Hectares--- | | | ---Kilograms Per Hectare--- | | | | ---Million 480-Pound Bales--- | | | |
| World | 33.8 | 31.7 | 33.6 | 545 | 550 | 567 | 563 | 84.7 | 79.9 | 87.6 | 87.0 |
| United States | 4.8 | 3.9 | 4.7 | 694 | 688 | 718 | 711 | 15.4 | 12.2 | 15.6 | 15.5 |
| Total Foreign | 29.0 | 27.8 | 28.9 | 521 | 531 | 543 | 539 | 69.3 | 67.7 | 72.0 | 71.5 |
| Maj. Foreign Exporters | 13.5 | 13.1 | 13.2 | 749 | 728 | 779 | 781 | 46.5 | 43.7 | 47.3 | 47.5 |
| Australia | 0.2 | 0.2 | 0.3 | 1,475 | 1,406 | 1290 | 1,290 | 1.3 | 1.4 | 1.6 | 1.6 |
| Central America 1/ | 0.1 | 0.1 | 0.1 | 830 | 834 | 807 | 807 | 0.4 | 0.3 | 0.3 | 0.3 |
| China | 5.5 | 5.2 | 5.5 | 751 | 728 | 812 | 807 | 19.1 | 17.4 | 20.5 | 20.5 |
| Egypt | 0.4 | 0.4 | 0.4 | 718 | 683 | 719 | 719 | 1.4 | 1.3 | 1.4 | 1.4 |
| Mexico | 0.3 | 0.2 | 0.2 | 1,209 | 891 | 913 | 913 | 1.4 | 0.8 | 0.8 | 0.8 |
| Pakistan | 2.5 | 2.6 | 2.7 | 568 | 560 | 580 | 596 | 6.5 | 6.7 | 7.3 | 7.5 |
| Sudan | 0.3 | 0.3 | 0.2 | 443 | 456 | 499 | 499 | 0.6 | 0.6 | 0.4 | 0.4 |
| Turkey | 0.7 | 0.7 | 0.7 | 882 | 851 | 976 | 976 | 3.0 | 2.8 | 3.0 | 3.0 |
| USSR | 3.4 | 3.3 | 3.2 | 805 | 805 | 827 | 827 | 12.7 | 12.3 | 12.0 | 12.0 |
| Major Importers 2/ | 0.4 | 0.4 | 0.4 | 837 | 889 | 853 | 853 | 1.7 | 1.5 | 1.5 | 1.5 |
| Other Foreign | 15.0 | 14.4 | 15.3 | 306 | 342 | 330 | 321 | 21.1 | 22.5 | 23.1 | 22.5 |
| Argentina | 0.5 | 0.6 | 0.6 | 389 | 486 | 459 | 459 | 0.9 | 1.3 | 1.4 | 1.4 |
| Brazil | 2.4 | 1.9 | 2.1 | 311 | 347 | 353 | 332 | 3.4 | 3.0 | 3.4 | 3.2 |
| India | 7.3 | 7.3 | 7.7 | 245 | 310 | 277 | 271 | 8.3 | 10.4 | 9.8 | 9.6 |
| Syria | 0.2 | 0.2 | 0.2 | 667 | 930 | 907 | 977 | 0.5 | 0.7 | 0.7 | 0.7 |
| Others | 4.6 | 4.4 | 4.7 | 377 | 352 | 369 | 356 | 8.1 | 7.1 | 7.9 | 7.6 |

1/ Nicaragua, Guatemala, El Salvador, Honduras, and Costa Rica.

2/ Western Europe, Eastern Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.

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Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 8

The table below presents a 9-year record of the difference between the April projections and the final estimates. Using world wheat production as an example, changes between the April projection and the final estimate have averaged 2.6 million tons (0.5 percent) and ranged from -6.8 to 6.5 million tons. The April projection has been below the final 5 times and above the final 4 times.

RELIABILITY OF PRODUCTION PROJECTIONS

| COMMODITY AND REGION | PROJECTION AND FINAL ESTIMATES, 1981/82 – 1989/90 1/ | | | | | |
|-------------------------|--|---------------------------|-----------------------------|---------|--------------------|----------------|
| | Difference | | Lowest | Highest | Below Final | Above Final |
| | Average | Average | Difference | | | |
| | Percent | ---Million Metric Tons--- | | | Number of Years 2/ | |
| <i>WHEAT</i> | | | | | | |
| World | 0.5 | 2.6 | –6.8 | 6.5 | 5 | 4 |
| U.S. | 0.1 | 0.0 | –0.1 | 0.1 | 4 | 1 |
| Foreign | 0.6 | 2.6 | –6.8 | 6.5 | 5 | 4 |
| <i>COARSE GRAINS 3/</i> | | | | | | |
| World | 0.5 | 4.0 | –7.1 | 4.3 | 6 | 3 |
| U.S. | 0.1 | 0.2 | –0.2 | 1.3 | 5 | 1 |
| Foreign | 0.7 | 4.1 | –7.1 | 4.3 | 6 | 3 |
| <i>RICE (Milled)</i> | | | | | | |
| World | 1.3 | 4.1 | –9.0 | 1.3 | 8 | 1 |
| U.S. | 1.2 | 0.1 | –0.2 | 0.1 | 3 | 1 |
| Foreign | 1.4 | 4.1 | –9.0 | 1.3 | 8 | 1 |
| <i>SOYBEANS</i> | | | | | | |
| World | 1.7 | 1.6 | –2.5 | 1.7 | 5 | 4 |
| U.S. | 1.3 | 0.7 | –1.1 | 1.8 | 3 | 5 |
| Foreign | 2.4 | 1.0 | –2.2 | 1.1 | 8 | 1 |
| | | | ---Million 480-lb. Bales--- | | | |
| <i>COTTON</i> | | | | | | |
| World | 0.9 | 0.7 | –3.0 | 0.1 | 7 | 2 |
| U.S. | 0.1 | 0.0 | 0.0 | 0.1 | 2 | 2 |
| Foreign | 1.1 | 0.7 | –3.0 | 0.1 | 6 | 3 |
| <i>UNITED STATES</i> | | | -----Million Bushels----- | | | |
| <i>CORN</i> | 0.1 | 5 | –8 | 38 | 1 | 1 |
| <i>SORGHUM</i> | 0.1 | 1 | 0 | 4 | 0 | 2 |
| <i>BARLEY</i> | 0.5 | 2 | –3 | 11 | 5 | 1 |
| <i>OATS</i> | 0.1 | 0 | –2 | 0 | 2 | 0 |

1/ The final estimate for 1981/82-1989/90 is defined as the first November estimate following the marketing year.

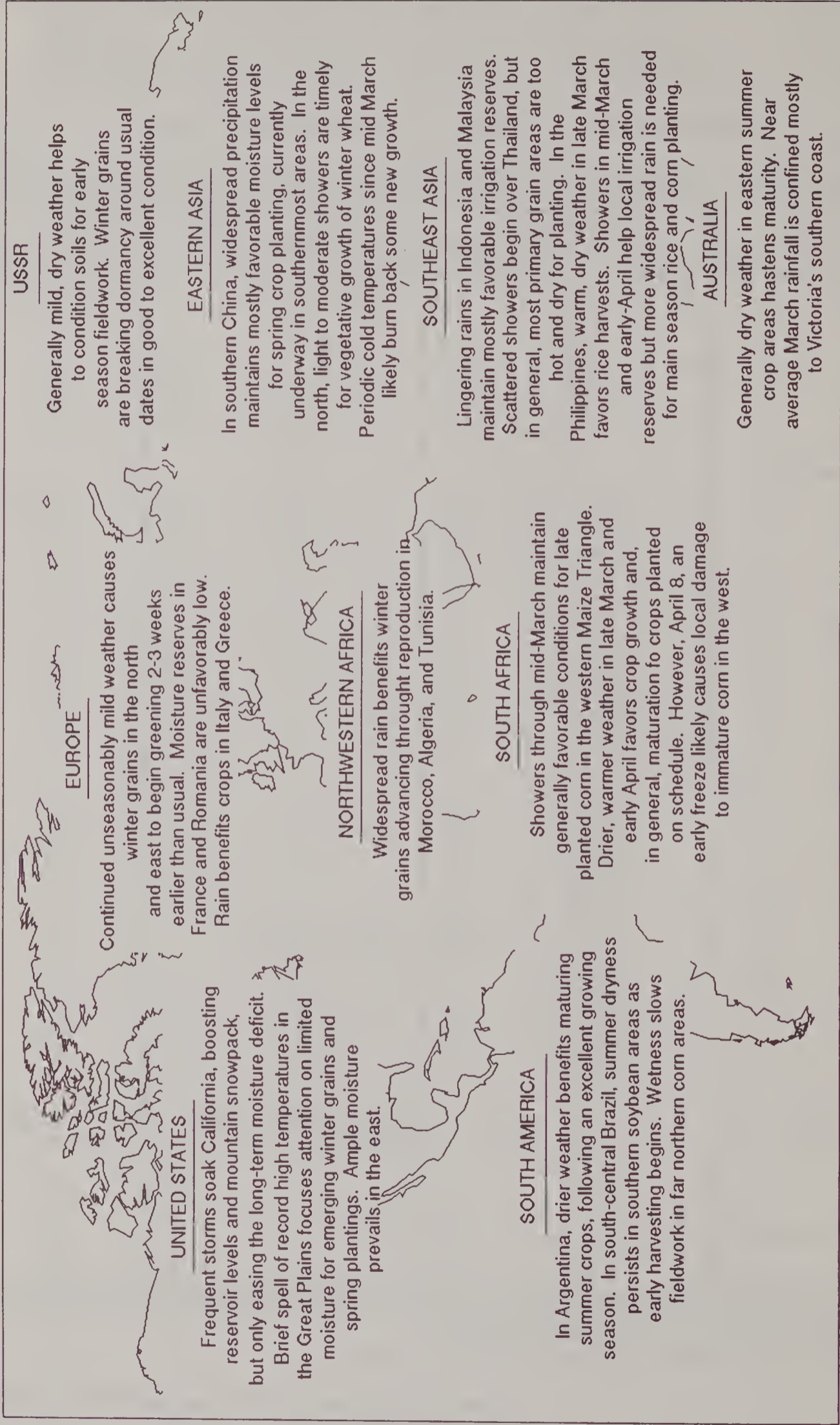
2/ May not total nine if projection was the same as the final.

3/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.

WORLD AGRICULTURAL WEATHER HIGHLIGHTS

APRIL 10, 1991

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY



(More details are available in the Weekly Weather and Crop Bulletin. Subscription information may be obtained by calling (202) 447-7917.

ASIA: HEAVY MOUNTAIN SNOW LEVELS WILL AFFECT AGRICULTURE

Heavy snow pack in the mountains of south central Asia will likely have mixed effects on 1991/1992 crop production. Analysis of precipitation data and satellite imagery indicates that snow levels in this region, as of April 10, 1991, are at their highest levels since spring 1987. This region includes the mountains of northern Iran, Afghanistan, southern Soviet Central Asia, northwest China, northeast Pakistan and the Himalayas of Tibet, Nepal, and northern India. Runoff from melting snow this summer will provide abundant water for irrigated crops in Soviet Central Asia, Pakistan, and northern India. On the downside, there is potential for serious flooding along the Indus River of Pakistan and the Ganges and Brahmaputra Rivers of eastern India and Bangladesh. Satellite imagery analysis as of March 31, 1991, indicates reservoir levels in northern Pakistan. The intensity of flooding will be determined by river flow and reservoir management in Pakistan and the amount of spring and summer precipitation. In July and August of 1987, flooding was severe in Pakistan, eastern India, and Bangladesh. Mountain runoff, seasonal monsoon, and seasonal cyclonic storms combined to cause this flooding.

ROMANIA: DRYNESS CONTINUES

Dry conditions reported in the March World Agricultural Production circular continued for another month across Romania. Below normal precipitation continued during March 11 - April 9, 1991, with light amounts, about 10 millimeters (mm), just enough to settle the dust. The combination of last summer's drought and well below normal precipitation during the fall and winter depleted soil moisture reserves. Timely precipitation during the growing season will be needed for Romania to reach average crop yield levels.

SOUTH AFRICA: GREATLY IMPROVED FROM EARLY DROUGHT

Precipitation continued to be well timed and widespread across the Maize Triangle of South Africa in March 1991. Precipitation during March 10 - 23, 1991, was particularly heavy, with portions of the western Maize Triangle receiving close to 200 mm. March 24 - April 9, 1991 has been seasonably and favorably dry across the Maize Triangle. A greater than normal portion of the corn crop, particularly in the western Maize Triangle was planted late this season, well into January. Consequently a greater portion of the corn crop will mature at a later date than normal, increasing the risk of frost damage. On April 8, 1991, an early freeze likely caused some local damage in the west. Accumulation of enough "growing degree days" to mature the corn crop is becoming a major concern since days are becoming seasonably cooler and so much of the corn crop is late this year.

PRODUCTION BRIEFS

BRAZIL: NEW ORANGE CROP SAME AS CURRENT CROP

The 1991 Brazil orange crop is projected to be 240 million boxes (40.8 kilograms per box), the same as the 1990 crop but down 55 million from the record 1989 crop, according to the U.S. agricultural officer in Sao Paulo. Early prospects for the 1991/92 crop were expected to be about 300 million boxes, but unusual weather in November 1990 and "bloom blight" caused flowers to fall and early fruit did not set well, causing the estimate to fall to 200 million. However, since November the weather has been favorable and larger fruit size is expected to boost the current crop to last year's level. Sao Paulo accounts for all but about 45-50 million boxes of oranges produced in Brazil.

CANADA: 1991/92 PLANTED AREA FORECAST BY STATISTICS CANADA

According to Statistics Canada, wheat area in 1991/92 is forecast to fall 4 percent below last year's near record level. Oats, barley, canola, corn, and soybeans seedings are forecast higher for 1991/92. Little change is estimated in durum wheat and flaxseed area. The estimates of seeding intentions are based on a telephone survey of 10,000 farmers during the period February 25 to March 1. Over the past 10 years, these estimates have been within 4 percent of the final seeded area. However, this year the forecasts were made before farmers had sufficient time to study the Canadian Government's new Gross Revenue Insurance Plan and the Net Income Stabilization Account programs. As a result, farmers indicated that their planting intentions may change. USDA will make its initial 1991/92 Canadian production, supply, and demand estimates for grains in May and oilseeds in July.

Canadian 1991/92 Planted Area
Compared to Harvested Area Estimates

| Year | Wheat | Barley | Corn | Oats | Canola | Soybean | Flaxseed |
|------------|----------------------------|--------|------|------|--------|---------|----------|
| | -----Million Hectares----- | | | | | | |
| 1991/92 1/ | 13.6 | 4.8 | 1.1 | 1.7 | 2.9 | 0.6 | 0.7 |
| 1990/91 2/ | 14.1 | 4.6 | 1.0 | 1.5 | 2.6 | 0.5 | 0.7 |
| 1989/90 2/ | 13.6 | 4.7 | 1.0 | 1.7 | 2.9 | 0.5 | 0.6 |

1/ Statistics Canada planted area forecast.

2/ USDA estimated harvested area.

CHINA: COTTON PRODUCTION SURPASSES EXPECTATIONS

The Chinese Government's preliminary official estimate for the 1990/91 cotton crop is 4.47 million tons (20.5 million 480-pound bales), well above earlier unofficial estimates. The official estimate reflects unusually mild weather conditions throughout the fall of 1990 which contributed to cotton yields that were higher than anticipated. Although official provincial estimates will not be available until late April or May, preliminary estimates show major production increases in the provinces of Henan, Hebei, Hubei, and especially Xinjiang, where cotton output was 50 percent higher than last year. Some provinces experienced less-than-favorable growing conditions, however. A series of typhoons in late summer caused significant crop losses in Jiangsu, while heavy rain and flooding hurt cotton yields in Shandong.

COLOMBIA: MORE MEAT AND LESS EGGS IN 1990

Colombian poultry meat output in 1990 is estimated at 298,000 tons, 3 percent above 1989 but still below the record 1988 production of 309,000 tons. The large production in 1988 caused a sharp drop in prices (after adjusting for inflation) which so far have not fully recovered. Output may increase slightly in 1991 as prices in recent months have improved at the same pace as inflation. Egg output in 1990 is estimated at 4.7 billion eggs, down 5 percent, as prices (adjusted for inflation) fell. Somewhat higher prices and a 4-percent increase in production are forecast for 1991.

ISRAEL: CITRUS PRODUCTION DOWN FOR 1990/91

Total Israeli citrus production for 1990/91 is forecast at 1.24 million tons, down 11 percent from last year and 12 percent from the December 1990 estimate. The decrease is a result of dry weather and disruptions in picking due to the Gulf War. Orange production is down 90,000 tons to 700,000, grapefruit is reduced 18,000 tons to 380,000, and tangerines have declined 34,000 tons to 100,000. Dry weather is also expected to impact the 1991/1992 crop since rainfall has only been 50 to 60 percent of normal in 1991 and irrigation quotas are expected to be cut -- up to 60 percent in some areas.

MEXICO: STRAWBERRY AREA DECLINES

Mexico's 1990/91 fresh strawberry crop is forecast at 111,000 tons, down 2 percent from last season. Growing conditions have been generally favorable, but area is down due to lower returns for strawberries and the higher costs of financing production. In peso terms, production costs are up over 50 percent while the March wholesale price was up only 5 percent. Cold weather in mid-December caused some frost damage but not enough to compromise quality. Some producers considered the net effect to be beneficial, since the frost-retarded disease and insect infestations and helped boost farmgate prices.

Production of frozen strawberries is expected to decline about 2 percent to 48,000 tons, in line with the decline in fresh production. Rising domestic sugar prices are adversely affecting the price competitiveness of Mexican frozen strawberries in international markets.

| Mexico: Strawberries, Fresh and Frozen | | | | |
|--|---------------------------------|-------------------------|--------------------------------------|---------------------------------------|
| Year | Area Harvested (Hectares) | Yield (Tons/hectare) | Fresh Production (Metric tons) | Frozen Production (Metric tons) |
| 1970/71 | 6,903 | 14.98 | 103,440 | N/A |
| 1971/72 | 5,682 | 15.53 | 88,228 | N/A |
| 1972/73 | 6,661 | 15.72 | 104,684 | N/A |
| 1973/74 | 6,339 | 16.24 | 102,958 | N/A |
| 1974/75 | 5,328 | 16.44 | 87,618 | N/A |
| 1975/76 | 5,684 | 15.71 | 89,321 | N/A |
| 1976/77 | 5,529 | 15.98 | 88,327 | N/A |
| 1977/78 | 5,709 | 15.50 | 88,502 | N/A |
| 1978/79 | 5,340 | 16.38 | 87,450 | N/A |
| 1979/80 | 5,200 | 15.94 | 82,900 | N/A |
| 1980/81 | 4,400 | 17.50 | 77,000 | 38,000 |
| 1981/82 | 3,900 | 16.33 | 63,700 | 37,300 |
| 1982/83 | 3,800 | 20.24 | 76,900 | 33,000 |
| 1983/84 | 4,200 | 22.02 | 92,500 | 40,000 |
| 1984/85 | 3,500 | 19.00 | 66,500 | 25,554 |
| 1985/86 | 4,000 | 17.00 | 68,000 | 28,052 |
| 1986/87 | 4,750 | 19.14 | 90,900 | 39,753 |
| 1987/88 | 5,600 | 20.00 | 112,000 | 51,408 |
| 1988/89 | 6,000 | 16.00 | 96,000 | 30,000 |
| 1989/90 | 6,300 | 18.00 | 113,400 | 49,000 |
| 1990/91 ^{1/} | 6,200 | 17.90 | 111,000 | 48,000 |

^{1/} Preliminary.

SOVIET GRAIN PRODUCERS FACE CHALLENGING SPRING SCHEDULE

As the spring sowing season approaches, the Soviet press has been filled with reports describing problems faced by state and collective farms. Some of the problems have a familiar ring: inadequate preparation, machinery out of service, and shortages of material. More disturbing, however, from the standpoint of Soviet grain producers, are the difficulties that have resulted from last fall's delayed harvest. Wet weather late in the crop season, combined with record grain yields, placed unusual strain on equipment and manpower during the 1990 harvest. The delay in completion of the harvest led to a sharp reduction from year-earlier levels in the planting of winter crops and fall plowing. Farmers now face, with reduced resources, a spring sowing campaign of unusual proportions.

Soviet officials have announced a preliminary 1991/92 winter grain area of 31.1 million hectares, compared to 34.4 million hectares the previous year. Although it is uncertain how much of this decline can be directly attributed to delays in the 1990 harvest, the reduction in winter grain sown area was unexpected. The decrease in winter grain area will most likely increase spring barley area, thus placing an extra load on the spring work schedule. An even greater task, however, will be completing the plowing unfinished from last fall. In a typical year, about 120 million hectares are plowed in the fall in preparation for spring crop seeding. By the end of 1990, 20 million hectares

remained unplowed; this land will have to be cultivated prior to planting the spring crop. Soviet analysts estimate that the amount of spring field work will increase by 25 percent this year. Some areas of the the non-chernozem region of the Russian republic, land has been prepared for only one-quarter of the spring crops.

THAILAND: HOG SLAUGHTER ROSE IN 1990

Hog slaughter increased 4 percent in 1990 to 7.25 million head. A somewhat higher rate of increase had been expected, but the rise was limited because of hot weather during March and April, flooding in October, an outbreak of foot-and-mouth disease, and declining prices. A sharp price decline was partially offset by lower feed costs which allowed profit margins to remain positive. Pork output for 1991 is expected to increase 1 to 2 percent.

INDIA SOYBEAN PRODUCTION, SITUATION, AND OUTLOOK

Soybean production in India has registered rapid growth over the past decade, with production increasing 425 percent to an estimated 2.1 million tons in 1990/91. Soybean area also expanded significantly, increasing 450 percent to an estimated 2.2 million hectares in 1990/91. This phenomenal performance was achieved despite serious cultivation and management handicaps, with the focus of soybean development centered primarily in the State of Madhya Pradesh. Soybeans are now the third largest oilseed crop in India, behind peanuts and rapeseed. Further gains in soybean production are expected, but it will be difficult to sustain the robust growth rate of the last decade. Constraints limiting future growth include declining availability of land, advantages of higher oil-content oilseeds in an edible oil-deficit country, and the difficulty of obtaining substantial additional yield increases.

HISTORICAL BACKGROUND

Cultivation of soybeans for meal and oil use is relatively recent in Indian agricultural history, although black varieties of soybeans called "kali tur" have been grown in some parts of the country since time immemorial. A concerted effort to increase soybean production was initiated in the mid-1960's with the active involvement of United States Agency for International Development (USAID). Under the USAID program, Indian agricultural scientists were trained at the University of Illinois in soybean cultivation, while several U.S. soybean experts visited India. In fact, the Bragg and Clark varieties of soybeans from the United States formed the corner stone of soybean variety development in India. Due to the lack of marketing facilities and other infrastructural problems, soybean cultivation did not take off until the late 1970's.

A combination of factors in the late seventies and early eighties triggered large-scale commercial cultivation of soybeans. The Government of India (GOI) began to focus attention on boosting production of nontraditional oilseeds to help reduce India's level of vegetable oil imports. Cooperative Oilseed Federations were established to provide better price incentives to farmers cultivating nontraditional oilseeds and a nationwide support price was established for soybeans in 1976. In addition, significant growth in soybean processing capacity in the central Indian State of Madhya Pradesh provided a ready market and favorable atmosphere for the growth of soybean cultivation there. The Madhya Pradesh State government also provided cheap credit and various tax incentives to the private and cooperative sectors to set up soybean processing plants, which resulted in a mushrooming of soybean processing units in the State. The current processing capacity is around 3.0 million tons and still growing.

High domestic prices for vegetable oils, good export demand for soymeal, and a 10 percent export subsidy on oilmeal enabled the soybean processors to make a profit. Private processors and the cooperatives pushed up prices in competition for limited soybean supplies from the domestic market. In the drought year of 1987/88, soybean prices soared to a record level of 8,500 rupees (US\$ 445) per ton. During the 1990/91 peak market season, processors were offering farmers prices ranging from 5,500-6,000 Rs. (US\$ 290-315) per ton.

INSTITUTIONAL SUPPORT

In 1967, the Indian Council of Agricultural Research (ICAR) launched an All India Coordinated Research Project on soybeans, with headquarters in Pant Nagar in Uttar Pradesh. The project was inter-disciplinary and had multiple research sites throughout India. Several improved soybean varieties were developed under this project. However, to provide a sound research base for long-range soybean development, a National Research Center for Soybean was established in 1987 at the city of Indore in the heart of the soybean belt in Madhya Pradesh. This center has a mandate to conduct basic research in breeding improved soybean varieties and the standardization of related cultivation practices which are suited to different agro-climatic conditions. The center also serves as a repository of soybean germ plasm and breeder seeds of national varieties.

An Oilseed Technology Mission (OTM) was set up by the Government in 1986 with the goal of making India self-sufficient in vegetable oil production. The OTM is basically a consortium of different government agencies concerned with oilseed and vegetable oil production, processing, imports, and distribution. Its aim was to develop an integrated crop production technology and support system for farmers. The integrated system was to supply growers with crop inputs, to improve post-harvest technology, to provide strong price support to farmers, and to provide fiscal and technological support to the processing industry.

The National Dairy Development Board (NDDB), a national quasi-governmental milk cooperative located in Anand, Gujarat, also became involved with oilseed development a few years ago. Using funds generated by the sale of P.L. 480 soybean oil from the United States and donated rapeseed oil from Canada, the NDDB assisted various states to set up Oilseed Cooperative Federations for the integrated development of production, procurement, processing, and marketing of oilseeds and vegetable oils. In the private sector, the Soybean Processors' Association of India (SOPA) is providing technical and extension support to soybean farmers.

SOYBEAN CULTIVATION

In India, soybeans are mainly grown in the "kharif" or summer monsoon season. They are planted in June and harvested in October. The State of Madhya Pradesh accounts for nearly 80 percent of the the country's soybean production and the Malwa region in the western part of the State is the major producing area. Other significant soybean growing States are Uttar Pradesh, Rajasthan, and Maharashtra.

The recent growth in soybean cultivation occurred in regions where large areas of land traditionally lay fallow during the kharif season due to a lack of irrigation to compensate for uneven rains and a suitable crop to fit into the existing cropping pattern. Farmers in the soybean growing region previously cultivated a single crop of wheat or chickpeas during the winter or "rabi" growing season, utilizing the stored soil moisture reserves accumulated during the summer monsoon period. In recent years, soybean farmers began cultivating the summer fallow area in this region, as well as some land devoted to kharif planted sorghum and millet. This displacement of summer coarse grain production has accounted for up to one-third of the soybean harvested area, or 700,000 hectares.

The Madhya Pradesh State government's current policy is to prevent the diversion of any more grain, pulse, or alternative oilseed crop area with soybeans. This policy will directly constrain future expansion in soybean cultivation in this important region. In the Malwa region, there is now little opportunity to increase soybean area without replacing other crops like sorghum or pigeon peas, since nearly the entire fallow area has been brought under soybean cultivation. However, in eastern Madhya Pradesh there is some opportunity for soybean cultivation if low yielding upland rice areas are converted. Eastern States such as Bihar, Orissa, and Andhra Pradesh also show potential for increased soybean area. It is estimated that total soybean area could reach 3.0 million hectares in the near future, based on an average annual increase of 70,000 hectares in Madhya Pradesh and 20,000 hectares in Maharashtra, Rajasthan, and Gujarat. The accompanying map shows the current and potential soybean production areas in India.

While most of the recent growth in Indian soybean production is due to increased harvested area, national yields have also improved significantly. In the current 1990/91 growing season, soybean yields are forecast at a record 0.96 tons per hectare, up from 0.6 tons a decade ago. In the past, the majority of soybean's sown were of the black "kali tur" variety, but higher prices and better yields encouraged farmers to shift to yellow varieties. High yields were achieved in the mid-1970's, but on a limited area. As soybean area was significantly expanded during the 1980's, average yields declined. New varieties were developed from a domestic breeding program suited to different agro-climatic regions and yields are now as high as they have ever been. India currently has some 46 varieties of soybeans, the most popular include Bragg, Clark-63, Durga, Gaurav, MACS-13, MACS-58, and various JS varieties.

Experimental fields have recorded yields as high as 2.5 tons per hectare, although maximum attainable yield at the farmers level is estimated at only 2.0 tons. Given various input and infrastructural constraints, it is estimated that the nationwide average yield is unlikely to exceed 1.2 tons per hectare by the year 2000, although certain areas could exceed 1.5 tons.

CONSTRAINTS TO GROWTH

Factors which are likely to constrain future production increases include: (a) a shortage of high yielding seed varieties and lower prices; (b) non-availability of suitable rhizobium culture; (c) possibility of a large-scale pest or disease infestation; (d) over dependence on the export market for soymeal; (e) vulnerability to drought due to lack of assured irrigation, and (f) limited use of modern inputs.

Although various research institutes and universities have developed several high yielding varieties of soybean, good quality seeds are generally in short supply and are expensive. Private seed companies are not yet engaged in soybean seed production and farmers are not willing to pay a higher price for high-yielding variety (HYV) seed. Farmers mainly sow seed stored from the previous years crop. Current farm level seed replacement rate is only about 8 percent. Pod shattering and poor germination rates continue to be problems.

Commercial production of rhizobium culture is very limited and of poor quality. The Madhya Pradesh Oilseed Cooperative Federation is producing some rhizobium culture which is supplied to its farmer members. To date, the Indian soybean crop has not suffered any major damage due to disease or pest infestations. However, as larger areas are cultivated and the practice of using fewer major soybean varieties intensifies, there is a greater threat that pest or disease damage could become significant. The homogeneous character of the crop could result in significant damage from a pest or disease outbreak by quickly spreading through the entire soybean belt.

Most of the present soybean growing area is not irrigated. Favorable rainfall during the past 3 years has helped promote record crop yields. This region is historically plagued by inconsistent or deficient summer rainfall. In this respect, if moisture stress occurs during critical soybean growth stages in future crops, significant yield reductions could occur. Average yields during a severe drought in the 1987/88 growing season dropped to around 0.6 tons per hectare. In addition, use of fertilizers and agrochemicals for soybean production is very limited and unlikely to increase due to its rising cost. Optimum yields, such as those achieved at the research stations, are unlikely without increased use of appropriate inputs.

Soybean prices may be subject to decline if the world supply and demand of oilseed meals reduces international soybean meal prices. Indian processors are currently in a position to pay high prices to soybean growers due to both a strong demand for soymeal in the world market and high domestic prices for vegetable oils. In recent years, India's rising soybean oil prices have more than offset the drop in the export price for soybean meal. Since processors export virtually all of the meal, a sharp decline in world meal prices would squeeze profit margins of inefficient processors. This situation combined with lower domestic vegetable oil prices would lead to lower producer prices for soybeans. The termination of special rupee payment agreements with several East European countries like Poland and Czechoslovakia, and the Government's decision to curb switch deals for soymeal moving via the Soviet Union to hard currency markets, have altered the traditional export channels and may result in lower export prices.

FUTURE OUTLOOK

While there is potential for increased soybean production in India, it is likely to proceed at a more moderate pace during the 1990's. An annual increase in planted area of 3.5 to 4.0 percent through the year 2000 is clearly within India's capability. Combining this area with an annual increase of 2.0 to 2.5 percent in yield implies that Indian soybean production could reach 3.6 million tons by the year 2000. This outlook represents a dramatic deceleration in the expansion of planted area and a slower increase in average yield.

Rod Paschal, (202) 382-8881

Michael Shean, (202) 475-5135

This article is based on a report by the staff of the USDA Agricultural Counselor's office, New Delhi, India in March, 1991.

TABLE 9

INDIA: Soybean Area and Production Estimates by State

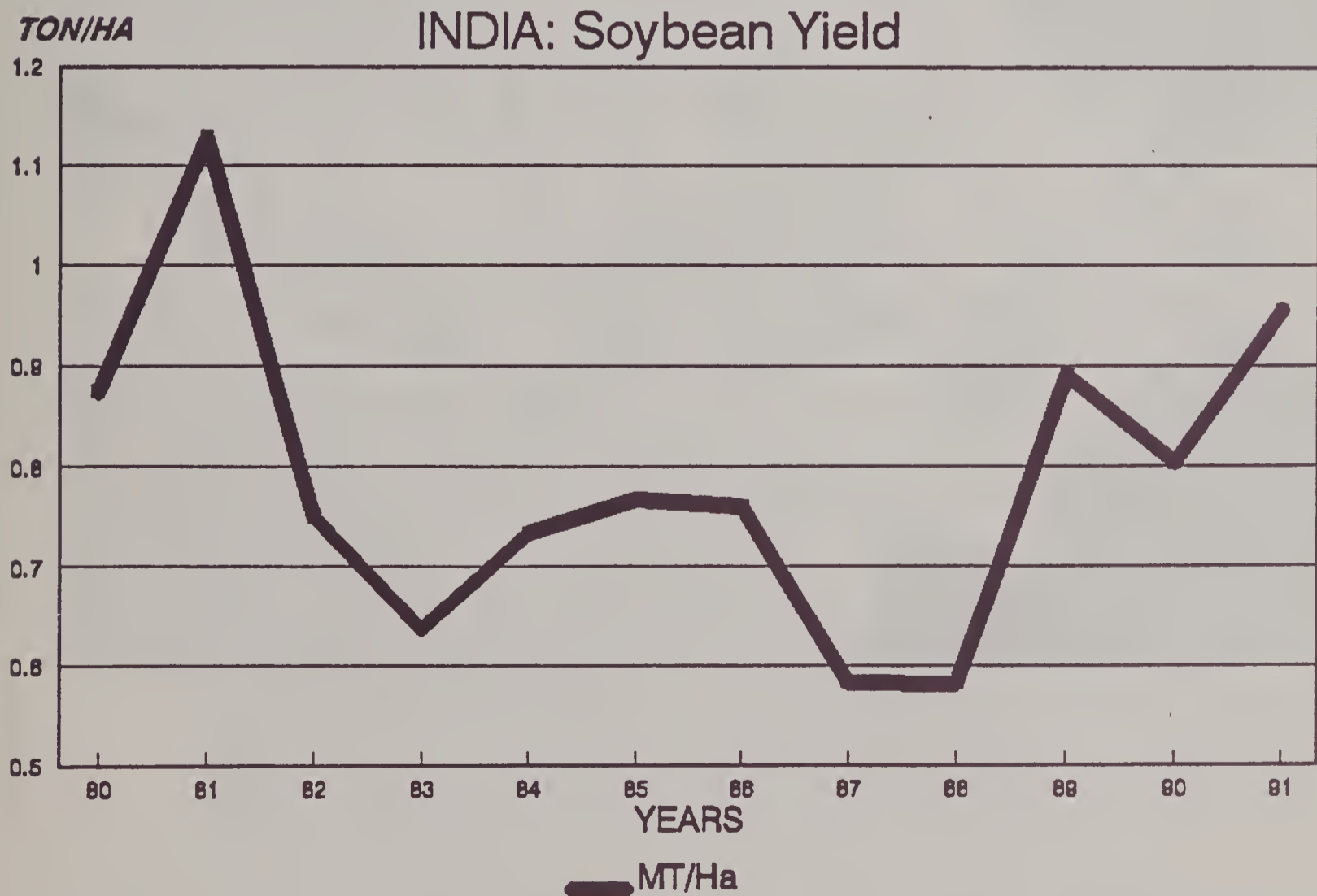
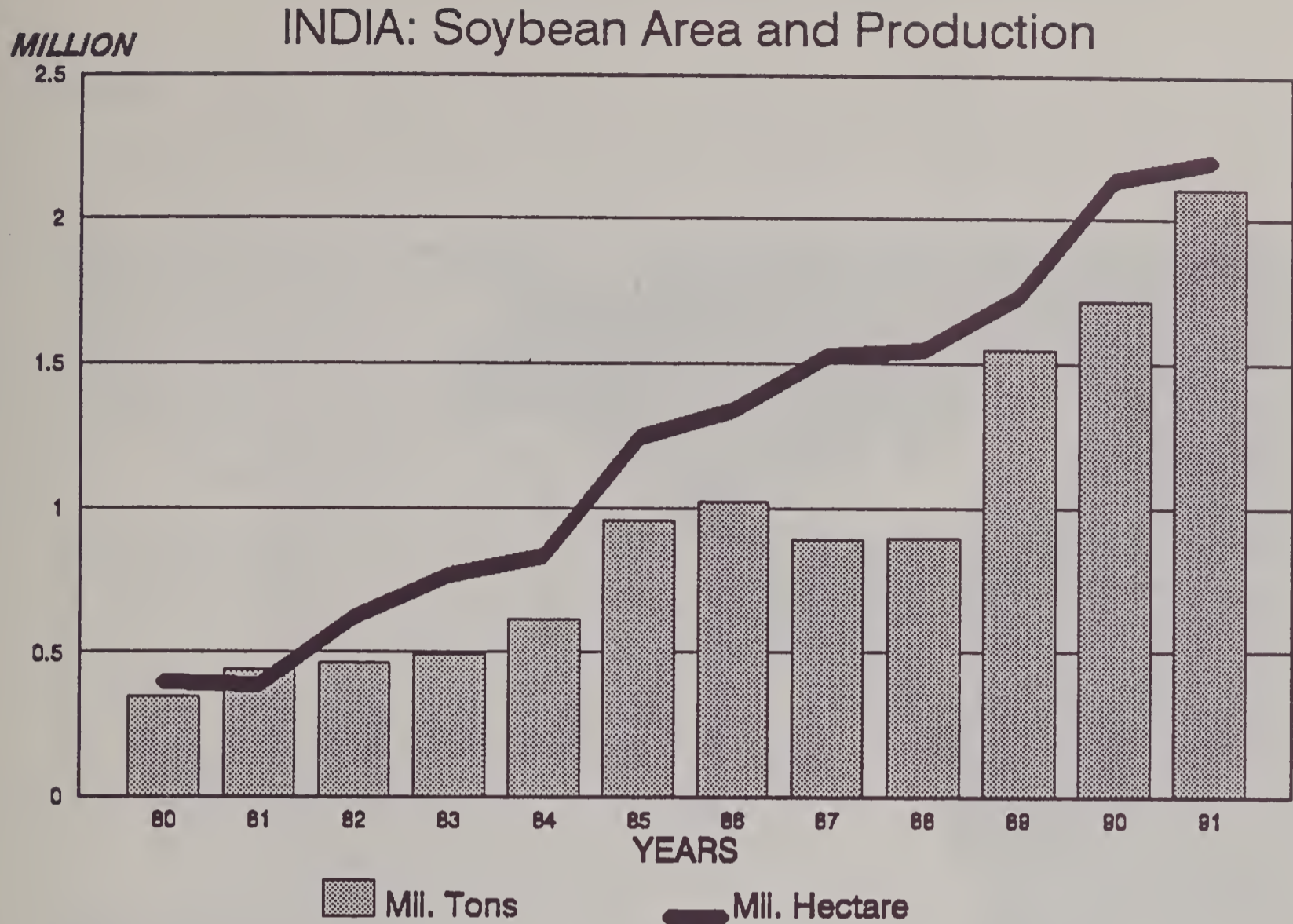
(Area in Thousand Hectares; Production in Thousand Tons; Yield in Kg/Ha)

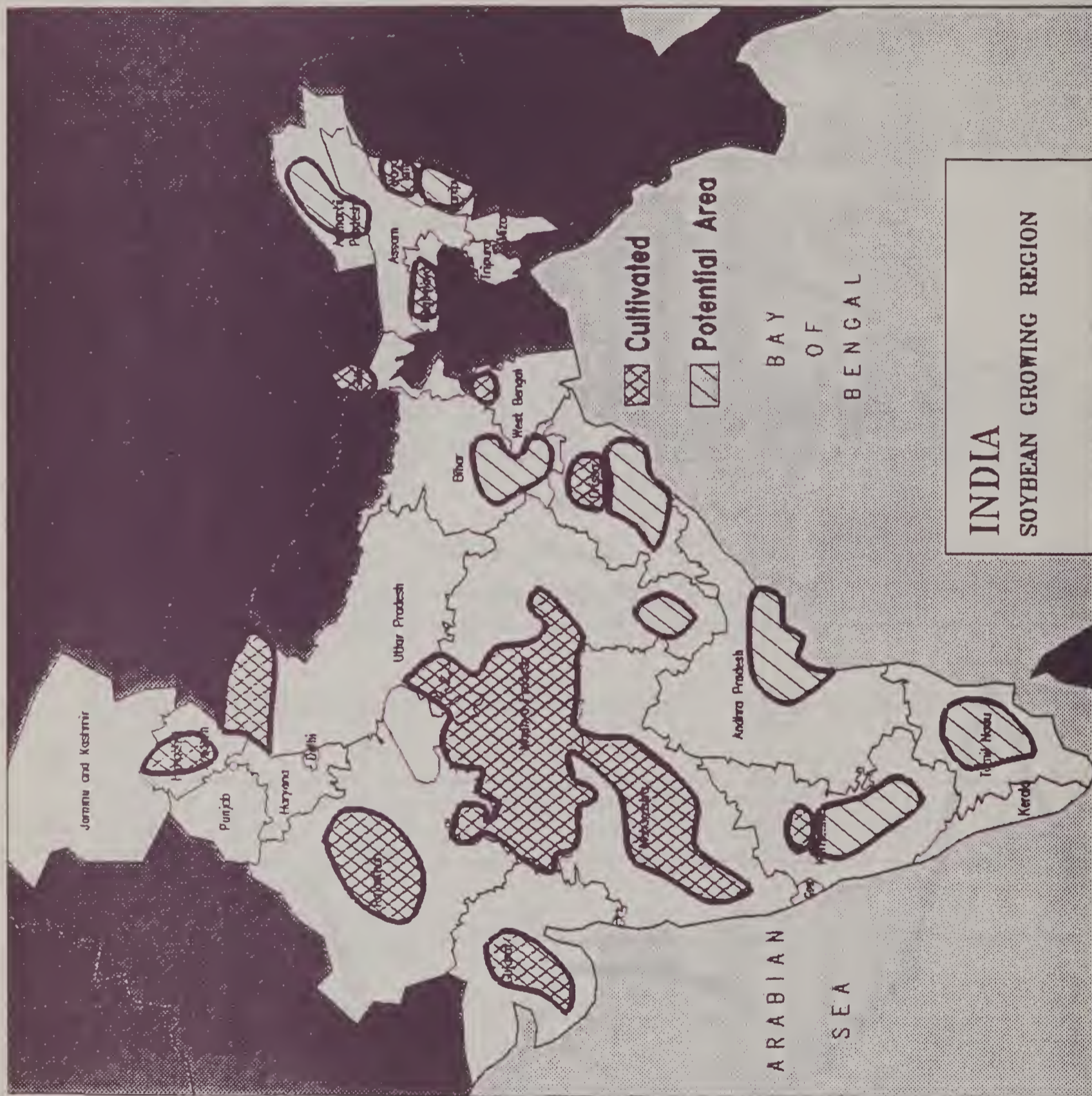
| | 1980/81 | 1981/82 | 1982/83 | 1983/84 | 1984/85 | 1985/86 | 1986/87 | 1987/88 | 1988/89 | 1989/90 | 1990/91 |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <u>Gujarat</u> | | | | | | | | | | | |
| Area | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 1.2 | 22.4 | 10.2 | 16.5 | 22.9 | 25.0 |
| Yield | 409.1 | 409.1 | 409.1 | 409.1 | 409.1 | 833.2 | 267.9 | 303.9 | 745.9 | 834.1 | 800.0 |
| Prod | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 1.0 | 6.0 | 3.1 | 12.3 | 19.1 | 20.0 |
| <u>Madhya Pradesh</u> | | | | | | | | | | | |
| Area | 454.8 | 307.3 | 584.1 | 613.8 | 986.6 | 1,096.5 | 1,209.6 | 1,329.4 | 1,475.8 | 1,755.4 | 1,800.0 |
| Yield | 769.6 | 765.1 | 613.9 | 752.0 | 780.1 | 756.0 | 560.0 | 577.0 | 890.0 | 802.0 | 972.2 |
| Prod | 350.0 | 235.1 | 358.6 | 461.6 | 769.6 | 829.0 | 677.4 | 767.1 | 1,313.4 | 1,407.8 | 1,750.0 |
| <u>Maharashtra</u> | | | | | | | | | | | |
| Area | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 54.6 | 76.7 | 87.0 | 126.9 | 140.0 |
| Yield | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 362.6 | 320.7 | 646.0 | 788.8 | 928.6 |
| Prod | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.8 | 24.6 | 56.2 | 100.1 | 130.0 |
| <u>Rajasthan</u> | | | | | | | | | | | |
| Area | 4.8 | 9.8 | 11.7 | 22.6 | 30.5 | 42.7 | 52.0 | 84.0 | 106.5 | 169.0 | 170.0 |
| Yield | 520.8 | 663.3 | 538.5 | 690.3 | 855.7 | 744.7 | 753.8 | 733.3 | 1,154.9 | 800.0 | 882.4 |
| Prod | 2.5 | 6.5 | 6.3 | 15.6 | 26.1 | 31.8 | 39.2 | 61.6 | 123.0 | 135.2 | 150.0 |
| <u>Uttar Pradesh</u> | | | | | | | | | | | |
| Area | 135.0 | 141.2 | 157.2 | 181.7 | 207.0 | 192.0 | 167.4 | 18.0 | 15.9 | 21.3 | 25.0 |
| Yield | 622.2 | 721.0 | 746.8 | 701.2 | 715.0 | 802.1 | 809.4 | 1,033.3 | 1,314.5 | 1,328.6 | 1,200.0 |
| Prod | 84.0 | 101.8 | 117.4 | 127.4 | 148.0 | 154.0 | 135.5 | 18.6 | 20.9 | 28.3 | 30.0 |
| <u>Other States</u> | | | | | | | | | | | |
| Area | 2.0 | 5.3 | 6.2 | 7.1 | 7.6 | 7.3 | 20.8 | 24.3 | 32.4 | 38.8 | 40.0 |
| Yield | 600.0 | 698.1 | 677.4 | 732.4 | 868.4 | 1,137.0 | 649.0 | 958.8 | 657.4 | 621.1 | 500.0 |
| Prod | 1.2 | 3.7 | 4.2 | 5.2 | 6.6 | 8.3 | 13.5 | 23.3 | 21.3 | 24.1 | 20.0 |
| <u>Total India</u> | | | | | | | | | | | |
| Area | 607.6 | 474.6 | 770.2 | 836.2 | 1,242.7 | 1,339.7 | 1,526.8 | 1,542.6 | 1,734.1 | 2,134.3 | 2,200.0 |
| Yield | 727.8 | 740.8 | 637.5 | 734.6 | 768.3 | 764.4 | 583.8 | 582.3 | 892.2 | 803.4 | 954.5 |
| Prod | 442.2 | 351.6 | 491.0 | 614.3 | 954.8 | 1,024.1 | 891.4 | 898.3 | 1,547.1 | 1,714.6 | 2,100.0 |

Note: Official India statistics through 1989/90. 1990/91 is Agricultural Counselor Office Estimate

APRIL 1991

CHART 1





1991 WINTER GRAIN PROSPECTS IN THE NORTHERN HEMISPHERE
OUTSIDE THE UNITED STATES

SUMMARY: Winter grains account for roughly one-third of the world total wheat and coarse grain output. Winter grain production prospects in the Northern Hemisphere outside the United States are generally favorable, particularly in South Asia, north Africa, and the Soviet Union. A mild winter and adequate soil moisture in most of Europe and the USSR have allowed early spring field work and reports indicate that the winter grains crop is 2-3 weeks ahead of normal development. Dry weather has been a problem in some areas of Western Europe, mainly central France, and in the Balkan region of Eastern Europe. Although bitterly cold weather moved into western areas of the USSR and Europe in late-January and early February, only below average to average winterkill is anticipated. The sharp reduction in Soviet winter grains area is expected to more than offset small increases in planted area in the EC, northwest Africa, India, China, Turkey, and Mexico.

Western Europe: Generally, fall and winter weather throughout Europe was mostly favorable. Mild temperatures and adequate precipitation have resulted in good to very good conditions for winter grains crops across the region. Little or no winterkill has been reported despite an isolated cold snap that gripped Europe from late January into early February. Winter grains broke dormancy about 2-3 weeks earlier than usual due to unseasonably warm weather. The EC area set aside program will have little impact on grain area. Germany is a strong advocate of the program, but farmers in the other member states have shown less interest.

- o **France:** Winter soft wheat sowings for 1991 are estimated up 3 percent from a year earlier and durum area is up 13 percent. Winter barley plantings, however, are expected to be 1 percent lower. The winter grains area rise is partially attributed to a drop in rapeseed area and the conversion of pasture land to grain production. Although northern and central France has continued to be drier than normal, winter grains still retain the potential for favorable yields assuming normal spring rainfall.
- o **United Kingdom:** There has been a continued shift from the production of spring to winter varieties of wheat, with emphasis on higher yielding feed varieties. However, total wheat area is expected to be down 2 percent due to increases in rapeseed and flax area as well as land moved into the set aside program. Winter barley sowings are continuing to increase over spring barley (58 percent to 42 percent) since winter barley has higher yields and is preferred by U.K. maltsters. The winter grain crops were planted under generally excellent conditions and weather has been favorable for their establishment.
- o **Italy:** Winter wheat area is reported to be 1 percent lower than last year; depressed prices are causing the farmers to shift their land into corn production or into the set aside program. Soft wheat is estimated 3 percent lower than last year while durum wheat area is seen virtually unchanged. During the last 10 years, the area sown to bread wheat dropped by one-third and this trend is not likely to change in the near future. The winter has been generally favorable and minimal winterkill has been reported.

- o **West Germany:** Winter wheat plantings are estimated to be unchanged from the previous year although winter barley sowings are down 5 percent. A high profit margin is seen maintaining wheat area, while the reduction in barley area is attributed to the set aside program. Winter rye area is seen falling by 8 percent because average yields lag behind other grains. Farmers fear the elimination of the special markup on the bread rye intervention price. Bitterly cold temperatures in February apparently did not significantly harm winter crops and there are no indications of the yellow dwarf virus that infested crops last year.
- o **Spain/Portugal:** Winter grains are expected to rebound from last year's levels as wheat area is reported to be up 14 percent. Winter wheat and barley in Portugal is expected to return to the levels of 2 years ago after 1989/90's severe winter reduced the area harvested; rye and oats also are up sharply. Spain's barley area is reported to be down marginally, but wheat is up 8 percent. Despite a dry fall in Spain and rather wet fall in Portugal, weather has improved and has increased yield potential.
- o **Belgium/Luxembourg:** Winter grains area is virtually unchanged from last year. Wheat area is continuing to increase (up 2 percent from last year) at the expense of barley area (down 4 percent from 1990/91). Favorable weather has been reported throughout the growing season.
- o **Denmark:** Winter grains plantings are estimated to be 6 percent higher this year. Winter wheat sowings are up, although somewhat lower than initially anticipated due to heavy rains that caused some field losses. The last few years of mild winters and no winterkill have encouraged farmers to sharply increase the area under winter barley. Winter crops are developing satisfactorily under generally favorable growing conditions.
- o **Greece:** Winter grains plantings are reported to be up 4 percent this year. The area planted to soft wheat varieties continues the downward trend of the last 5 years as area is being switched to more profitable field crops. However, the area devoted to durum has increased as a result of attractive EC incentives. Barley area is seen lower in 1991/92 as low yields and better returns from other crops depress sown area. Late fall planting conditions were excellent with November/December rains dramatically improving soil moisture.

EASTERN EUROPE: The winter in Eastern Europe has generally been warmer and drier than normal. Eastern Europe experienced a cold snap in late January and early February that may have caused some damage in areas lacking adequate snow cover. Sown area is estimated to have increased in most of the countries but low soil moisture levels in much of the region, particularly in the south, may temper yield prospects. However, the soil moisture deficit could impact summer grains more than winter grains without normal-to-above-normal spring and summer rainfall. The move to a market economy in East European nations is changing agricultural subsidies and costs and has had a negative impact in several countries relative to fertilizer use and seed quality.

- o Poland: Generally, winter grains are in good condition, though signs of nitrogen deficiencies have been sighted, suggesting insufficient top dressing. Prices for mineral fertilizers and plant protection chemicals have increased and, as a result, usage rates have declined. Mild temperatures and plentiful precipitation improved crop conditions prior to winter dormancy. Continued favorable winter precipitation has boosted soil moisture levels and adequate snow cover helped protect wintering grains from the cold snap in late January and early February.
- o Czechoslovakia: Soil moisture levels are generally favorable despite last year's summer drought and dry fall planting conditions. The mild winter has been beneficial to wintering grains and winterkill is reportedly at a minimum.
- o Romania: The outlook for winter grains is less than favorable due to poor germination, poor soil moisture, and inadequate fuel supplies. Following a very dry fall and winter, normal-to-above-normal precipitation is now required to boost yield prospects.
- o Yugoslavia: The outlook for the winter grains is somewhat mixed at this time as planting conditions were average but most of the seeding was late. The effects of low temperatures at the end of January and the beginning of February are considered to have had a negligible effect on winter grains. Although planted area is up from last year, changes in governmental policy and the economy had a negative impact on the use of fertilizers and the quality of seed sown last autumn.

USSR: For the third consecutive year, the major winter grain producing areas have experienced a milder-than-normal winter. Fall sowing was delayed in the more northern areas due to delays in harvesting the spring and summer crops and prolonged wet conditions. The final sowing progress report indicated winter grains were sown on only 31.1 million hectares compared to 34.4 million in 1989, down 3.3 million. Fall plowing of land to be planted to spring crops was behind 1989 by nearly 20 million hectares. In addition to making up for last fall's shortfall in plowing, other serious concerns voiced in the Soviet press include expected shortages in fertilizer, plant protectants, fuel, tractors, spare parts, and supplies of acceptable seed stocks.

Winterkill is expected to be slightly more than last year but still below the long-term average. Soviet press reports expressed concern over the potential adverse impact from an episode of bitter cold in early February along with a shallow snow cover in the western Central Region, parts of the Black Soils Region, Belorussia, and the western Ukraine. Moisture accumulations for the fall and winter (September-February) were slightly above normal for most areas, although March precipitation was light in the Ukraine and lower Volga regions.

Since March 1, continued unseasonably warm weather has diminished snow cover 2-3 weeks earlier than usual over the major winter wheat producing areas of the Ukraine, Black Soils Region, and the North Caucasus. Although winter grains remain dormant in most areas, some greening-up may have occurred by late March in the southwestern Ukraine and the western North Caucasus. Currently, prospects for winter grains are good to excellent, although the area is reduced.

NORTHWEST AFRICA

- o **Morocco:** Winter grain planting, which usually begins in November, was delayed until mid-December due to inadequate early-season rainfall. Conditions have improved significantly in the wheat areas of northern and northwestern Morocco, with abundant rainfall aiding crop prospects. Rainfall remained inadequate until mid-February in the southern winter grain areas, affecting mainly barley. Planted area is estimated to have increased from last year as a result of high domestic market prices at the time of sowing. Higher durum wheat prices also have led to increased durum plantings. Soft wheat planted area experienced a decline, but existing favorable growing conditions have lead to good yield potential.
- o **Tunisia:** Abundant and well distributed rainfall during November provided favorable conditions for early crop establishment in barley and wheat growing regions. Winter grains are planted from October to December, with harvest beginning in May. The area planted to barley in 1991/92 is estimated above last year's levels. Wheat area is estimated near record levels while favorable winter and spring precipitation has increased yield prospects.
- o **Algeria:** Winter wheat and barley planting traditionally coincide with the onset of the rainy season in mid-November. Planting of the 1991/92 winter grain crop began early due to the occurrence of favorable September precipitation. Abundant and well distributed rainfall continued throughout the planting season, providing favorable conditions for early crop establishment. Planted area is estimated to have increased over last year's below-average level. Yield prospects remain favorable.

ASIA

- o **India:** Fall planting conditions for winter grains were nearly ideal this year across the northern half of India, encompassing the greatest part of the winter wheat belt. A very successful summer monsoon left wheat zone soil profiles fully charged with moisture at planting, boosting early crop establishment. The current growing season's weather is nearly the opposite of last year, with a wet beginning followed by 4 months of seasonably dry and clear conditions. Favorable winter weather is expected to spur grain yields in the irrigated northwest states and in the rainfed region of western Madhya Pradesh. As of late March, the heavily irrigated northwest portion of the wheat belt is in the grain fill stage while the remainder of central and east India are beginning harvesting operations. Wheat area is forecast up 4 percent from last year.
- o **Pakistan:** Autumn planting conditions were dry in northern Pakistan's wheat zone owing to below-normal rainfall in October and November. Wheat yields were expected to be affected by lower fertilizer usage, as subsidies and imports were reduced. However, the current winter grain outlook is very favorable due to adequate irrigation supplies and timely winter rainfall during December and March. Winter grain establishment has been excellent, including the rainfed or "barani" growing zone north of the Jhelum river in Punjab. The barani zone is typically a swing production sector relying heavily on winter precipitation. Conditions near optimum for the growth of grains in dryland regions have enhanced yield potential. Wheat area is estimated to be virtually unchanged from last year.

- o Bangladesh: Autumn planting conditions were near optimal this year, with excellent post-monsoon soil moisture reserves aiding early crop establishment. Winter rainfall also played a key role in maintaining crop vigor prior to reproductive growth. Thus, this year's wheat crop has the potential to show a significant improvement in yield over last year's rain damaged harvest. The current crop outlook is favorable with wheat area forecast unchanged from last year.
- o China: Weather conditions for China's winter grain crop have been favorable for the third year in a row. Soil moisture levels were adequate during 1990 fall planting and above-normal temperatures encouraged strong crop development prior to dormancy. Most grain areas received moderate amounts of rain and snow during the normally dry winter, while temperatures were as much as 3 degrees Celsius above normal in January and February. Although the mild winter weather reduced the threat of winterkill, there is some concern that it could lead to pest and disease problems this spring. Current weather conditions are very good between the Yangtze and Yellow Rivers in northern China where the majority of the winter grain crop is grown. A drought was reported in the grain area north of the Yellow River last winter but widespread rain during March has improved the situation. In contrast, unusually heavy spring rain has caused some localized flooding and possible crop damage in the Yangtze River valley.

China's total winter grain planted area is estimated to have increased slightly above last year's level to more than 30 million hectares as farmers responded to favorable sowing conditions and the announcement of a generous State 'protection' or guaranteed minimum purchase price for the 1991/92 wheat crop. Most of the area increase came from an expansion of intercropping and double cropping in the southern wheat-growing provinces.

MIDDLE EAST: Except for Turkey, most of the Middle East is expected to produce average or lower-than-average winter grain crops for 1991/92 due to inadequate precipitation. Planted area, however, is estimated to have increased slightly in the region this year.

- o Israel: Despite recent rains, the lack of precipitation during the rainy season caused late germination and consequent poor development for winter grains and further increased the long-term precipitation deficit. The Government's restrictions on water usage for irrigation has caused a decrease in fodder production; some of the stunted winter grain crop may be used for livestock feed.
- o Jordan: Precipitation in Jordan during the fall of 1990 and early 1991 was less than average for the third consecutive year. Accordingly, prospects for agriculture output in 1991 are only average despite recent rains.
- o Saudi Arabia: Wheat production is again expected to be in excess of domestic needs although barley production is expected to increase slightly due to official support. The guaranteed producer price for barley however, remains much less than that for wheat. All winter grains are irrigated.

- o **Syria:** The rainy season, beginning in October, has been dry and may have adversely affected the mostly rainfed Syrian crop. However, recent timely rains have improved the outlook for 1991/92 wheat and barley crops. Increased prices of fertilizers and especially pesticides has restricted their use. However, the seasonal precipitation shortfall is viewed as the greatest threat to prospective Syrian winter grain production.
- o **Turkey:** Near-ideal weather has benefited winter grains, and wheat planted area has increased slightly over last year. Continued favorable weather in April and May will be needed to maintain current crop prospects, particularly in the southeast growing region.

NORTH AMERICA

- o **Canada:** Winter wheat plantings are down 30 percent from last year. Winter wheat in Ontario, which accounts for 40 percent of the winter wheat, declined 34 percent from 1990/91. The decrease from the record 1990/91 level can be attributed to poor prices and the late harvest of soybeans which prevented winter wheat sowings (winter wheat normally follows soybeans). Winter wheat area comprises about 3 percent of the total wheat area.
- o **Mexico:** Winter wheat area is estimated above last year due to adequate reservoir levels in the central growing region and in the primary growing States of Sonora and Sinaloa. Flooding in Sinaloa and Sonora occurred during late December, 1990, but damage to planted wheat appears to be minimal and no freeze damage has been reported. Producers were likely encouraged to plant more wheat due to higher wheat prices during the winter crop planting period.

Note: The initial forecast of wheat and coarse grain area, yield, and production for the 1991/92 year will appear in the May edition of the World Agricultural Production report.

Terry W. Taylor, Agronomist, (202) 475-5141

Contributing regional analysts:

| | | |
|------------------|-----------------------------|----------------|
| Tim Rocke | Western Europe, Canada | (202) 382-9172 |
| Jay Kress | Eastern Europe, Middle East | (202) 475-5142 |
| John Phillips | Soviet Union | (202) 475-5138 |
| Brenda Personnel | Northwest Africa | (202) 475-5139 |
| Michael Shean | South Asia | (202) 475-5135 |
| Paulette Sandene | East Asia | (202) 475-5133 |
| Robert Tetrault | Mexico | (202) 475-5140 |

| | |
|---|----------------|
| NOAA/USDA Joint Agricultural Weather Facility | (202) 447-7917 |
|---|----------------|

FIELD TRIP REPORT FOR ARGENTINE SUMMER CROPS

Foreign Agriculture Service personnel traveled through the major summer crop regions in Argentina during March of 1991. Argentine soybeans, corn, sorghum, sunflower, peanut, and cotton crops were assessed in Buenos Aires, Santa Fe, Cordoba, and Chaco provinces. Overall, summer crops are in good to excellent condition throughout the visited region. This assessment is supported by satellite image analysis indicating the best summer crop yields since 1985/86. Assessment and discussions with government and private industry agronomists and economists revealed the following information.

SOYBEANS -- Soybean production is forecast at a record 11.0 million tons for the 1990/91 crop, up 2 percent from 1989/90, due to above-average yields. Favorable weather at planting and throughout the summer has increased the yield potential by 6 percent over last year. There are more second season soybeans this year; these traditionally follow wheat. Timely rainfall, well placed throughout the season, has benefited both first-and second-crop soybeans. Yields are more dependent on weed control and management practices because water and soil moisture are adequate this year. Farmers and Government officials in the regions visited mentioned that herbicides are expensive and are not cost effective to apply.

In mid-March, soybeans are at the pod-setting to pod-filling stage in the main soybean belt of southern Santa Fe, northern Buenos Aires, and eastern Cordoba. Harvest is a month away for first-season soybeans and 2 months away for second-season soybeans. Area declined by 3 percent from last year's record area due to regional increases in peanuts and cotton and a marginal increase in corn in the corn soybean belt. Government officials and farmers indicated that planting decisions were based on cost-competitiveness assessments between soybeans and other crops.

CORN -- Near-record corn yields are estimated for 1990/91, 23 percent higher than last year's yields due to favorable weather and timely rains. Production is estimated at 7.5 million tons, up 44 percent from 1989/90. Corn is at dry-down in Santa Fe, Cordoba, and northern Buenos Aires and some harvesting has begun. Farmers visited in this region are pleased of their higher yielding corn. Estimated corn area increased slightly from 1989/90. Much of this increase was planted on better soils as in the Junin district of northern Buenos Aires. Corn is considered more profitable than soybeans when planted on high-yielding soils. Very few insect and disease problems were observed and there was good kernel development.

SORGHUM -- The potential for above-average sorghum yields in 1990/91 are a result of favorable weather. Production is estimated at 2.5 million tons for 1990/91. Harvest is underway in Cordoba and will begin soon in Buenos Aires and La Pampa. Area estimates increased slightly from last year despite lower profitability. Farmers and government officials indicated that grain sorghum is used in a rotation with peanuts and soybeans in Cordoba province and is used to improve soil structure in Santa Fe.

SUNFLOWER -- Sunflower yields in 1990/91 are forecast at a record level because of favorable weather throughout the growing season. Production is estimated at 3.6 million tons, 5 percent less than in 1989/90. Harvest is nearly complete in Chaco, Santa Fe, and Cordoba. Harvest is just beginning in Buenos Aires, the main producing province. Sunflowers in northern Buenos Aires ranged from flowering to maturity. Area declined by 18 percent due to poor results of last year's crop and competitiveness of cotton in Chaco.

PEANUTS -- Peanut yields are estimated higher than those of a year ago as a result of favorable weather. Production is estimated at 475,000 tons, an increase of 28 percent over 1989/90. Peanuts will be harvested by the end of the April for the majority of the crop, especially the runner varieties. Harvesting of colorados or redskin peanuts is occurring now. Farmers in the region visited said they prefer the runner varieties because of higher yields and better quality. Cordoba province produces nearly all of Argentina's peanuts. Area increased because the price relationship favored peanuts over soybeans, despite the higher management costs required for peanuts.

COTTON -- Cotton production is estimated at a record 294,000 tons (1.35 million bales) or a 6 percent increase from 1989/90. Harvesting of cotton began in January and will continue through June. Most of the harvest is done by hand. Higher quality cotton is harvested first and the quality deteriorates as the season progresses. Farmers and government officials stressed the importance of early maturing varieties for higher quality cotton. Ideal harvesting conditions were evident during field travel. Chaco and Formosa Provinces produce the majority of Argentine cotton. Planted area increased by 12 percent due to higher international prices and poor competition from sunflowers and soybeans. Late October flooding in Chaco province in 1990 necessitated replanting of some lower lying cotton and sunflower areas. Cotton replanting was finished by mid-December. Cotton yields vary widely and are dependent on planting time, variety, weather, and management practices.

Robert Tetrault (202) 475-5140

TABLE 10

Argentine Grains, Oilseeds, and Cotton

| | 1980/81 | 1981/82 | 1982/83 | 1983/84 | 1984/85 | 1985/86 | 1986/87 | 1987/88 | 1988/89 | 1989/90 | 1990/91 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| AREA HARVESTED (1,000 hectares) | | | | | | | | | | | |
| Corn | 3,394 | 3,170 | 2,970 | 3,024 | 3,340 | 3,351 | 2,900 | 2,600 | 1,700 | 1,700 | 2,000 |
| Sorghum | 2,100 | 2,510 | 2,520 | 2,370 | 1,965 | 1,400 | 1,100 | 1,000 | 600 | 700 | 750 |
| Soybean | 1,740 | 1,986 | 2,281 | 2,910 | 3,270 | 3,316 | 3,510 | 4,260 | 4,000 | 4,950 | 4,800 |
| Sunflower | 1,280 | 1,673 | 1,902 | 1,989 | 2,350 | 3,046 | 1,800 | 2,058 | 2,200 | 2,800 | 2,300 |
| Peanut | 197 | 166 | 125 | 146 | 143 | 168 | 233 | 192 | 150 | 180 | 200 |
| Cotton | 300 | 399 | 360 | 470 | 447 | 320 | 330 | 515 | 501 | 565 | 640 |
| YIELD (metric tons per hectare) | | | | | | | | | | | |
| Corn | 3.80 | 3.03 | 3.03 | 3.14 | 3.56 | 3.70 | 3.19 | 3.46 | 2.94 | 3.06 | 3.75 |
| Sorghum | 3.38 | 3.19 | 3.02 | 2.91 | 3.16 | 3.00 | 2.82 | 3.00 | 2.33 | 2.86 | 3.33 |
| Soybean | 2.01 | 2.09 | 1.84 | 2.41 | 2.06 | 2.20 | 1.99 | 2.28 | 1.63 | 2.17 | 2.29 |
| Sunflower | 0.98 | 1.18 | 1.26 | 1.11 | 1.45 | 1.35 | 1.39 | 1.36 | 1.45 | 1.36 | 1.57 |
| Peanut | 1.23 | 1.63 | 2.00 | 2.25 | 1.89 | 2.61 | 2.22 | 2.34 | 1.62 | 2.06 | 2.38 |
| Cotton | 0.28 | 0.38 | 0.31 | 0.38 | 0.38 | 0.37 | 0.32 | 0.55 | 0.39 | 0.49 | 0.46 |
| PRODUCTION (1,000 metric tons) | | | | | | | | | | | |
| Corn | 12,900 | 9,600 | 9,000 | 9,500 | 11,900 | 12,400 | 9,250 | 9,000 | 5,000 | 5,200 | 7,500 |
| Sorghum | 7,100 | 8,000 | 7,600 | 6,900 | 6,200 | 4,200 | 3,100 | 3,000 | 1,400 | 2,000 | 2,500 |
| Soybean | 3,500 | 4,150 | 4,200 | 7,000 | 6,750 | 7,300 | 7,000 | 9,700 | 6,500 | 10,750 | 11,000 |
| Sunflower | 1,260 | 1,980 | 2,400 | 2,200 | 3,400 | 4,100 | 2,500 | 2,800 | 3,200 | 3,800 | 3,600 |
| Peanut | 243 | 270 | 250 | 329 | 270 | 439 | 518 | 450 | 243 | 370 | 475 |
| Cotton | 85 | 153 | 112 | 180 | 171 | 119 | 105 | 282 | 195 | 277 | 294 |

APRIL 1991

Production Estimates and Crop Assessment Division, FAS, USDA

INDONESIA: LIVESTOCK SECTOR DEVELOPMENTS

Indonesia's livestock industry, though small, has shown steady growth during the past 5 years. The poultry sector has shown especially rapid growth. Very low per capita meat consumption levels and favorable economic growth patterns have given demand a strong boost. Despite the rapid growth of poultry meat and egg output, domestic consumption of animal protein in Indonesia is still well below the nutrient standard of 4.5 grams of animal protein per capita per day. This is mainly due to the limited production and relatively high prices of livestock products. The purpose of this article is to present recent growth patterns of Indonesian livestock production and to discuss certain aspects of future growth prospects.

Indonesia's mid-1990 population of 183 million, about 70 percent of which is rural, is the fifth largest in the world and a high percentage of the people live at the subsistence level. Per capita gross domestic product (GDP) measured in U.S. dollar terms is about \$530 annually. Although rural land ownership averages only 0.5 hectare per family, the agricultural sector accounts for about one-fifth of the GDP in Indonesia and employs about half the country's labor force. Relative to agricultural policy, the Government is committed to increasing the production of food crops, estate crops, and other agricultural commodities for both domestic use and exports. Goals specifically for livestock, include development of poultry and livestock subsectors for domestic consumption and export markets, and expansion of agricultural processing industries, as well as continued rapid growth of export fisheries.

Basic statistical information on Indonesia's livestock industry are shown in the following tables. Over the period shown, cattle and sheep numbers have grown at moderate rates, swine and layers numbers grew by roughly 50 percent while, broiler numbers tripled.

Two factors that could cause an acceleration in growth include changes in government policy and improved export opportunities. On the policy side, a May 1990 ruling that relaxed enterprise size maximums should stimulate development of larger, more efficient units. These maximums were established with the expressed purpose of encouraging small holder production. Enforcement has been rather limited and mainly directed at poultry producers. The new (as of May 28, 1990) maximum sizes for poultry and livestock small holder's farms are listed below.

| <u>Type of Farms</u> | <u>Maximum Number of Livestock</u> |
|----------------------|------------------------------------|
| Layers | 10,000 hens |
| Broilers | 15,000 head production/cycle |
| Swine | 125 head |
| Beef Cattle | 100 head |
| Dairy Cattle | 20 head |

According to the decree, farms which operate above this size are considered as large livestock companies, and for layer and broiler operations, must export at least 65 percent of their production. Previously, the Government limited the size of a broiler operation to 750 birds per week, and a layer flock to 5,000 birds.

Another policy change that should stimulate production is a Government program to encourage vertical integration called "KINAK" which was launched in late 1990. This plan encourages small farms to establish formal links with large firms to ensure the availability of technology, capital, and production inputs and to assist in marketing products. Further, a 1989 deregulation measure allowing free trade in corn should help stabilize prices and ensure adequate supplies for the poultry industry.

Opportunities for exports largely stem from Indonesia's proximity to rapidly developing Asian markets, particularly Singapore. Much of the recent growth in the swine sector has been the development of large modern farms that ship to Singapore. A large private company has been studying the feasibility of establishing a poultry farm which could produce around 200 million birds per year in Lomba and Bulan islands, Riau (Sumatra). The initial phase plans on around 50 million birds per year, with marketing of poultry and eggs focused on Singapore, Taiwan, Japan, and Batam island. Another Indonesian private company recently established a joint-venture feedlot operation with an Australian company in Lampung (Sumatra). It is reported that they will start importing cattle from Australia later this year, and will eventually have a production goal of 36,000 head of beef cattle per year. Around 60 percent of the production is reportedly targeted for export to Malaysia, Singapore, Brunei, and Middle East. Two other private companies are also interested in feedlot operations in Lampung. It is reported that these three ventures are planning to eventually produce a total of around 70,000-75,000 head per year.

Arthur Coffing (202) 382-8885

TABLE 11

INDONESIA: LIVESTOCK NUMBERS
(Million head)

| <u>Year</u> | <u>Beef 1/ Cattle</u> | <u>Dairy Cattle</u> | <u>Sheep & Goats</u> | <u>Swine</u> | <u>Village Chicken</u> | <u>Broilers</u> | <u>Layers</u> |
|----------------|---------------------------|-------------------------|----------------------------------|--------------|----------------------------|-----------------|---------------|
| 1984 | 9.24 | 0.20 | 13.73 | 5.11 | 167 | 111 | 30 |
| 1985 | 9.32 | 0.21 | 14.52 | 5.56 | 156 | 144 | 32 |
| 1986 | 9.43 | 0.22 | 16.02 | 6.22 | 163 | 174 | 39 |
| 1987 | 9.51 | 0.23 | 15.75 | 6.34 | 168 | 218 | 40 |
| 1988 <u>2/</u> | 9.78 | 0.24 | 16.44 | 6.48 | 183 | 227 | 38 |
| 1989 <u>3/</u> | 10.04 | 0.25 | 16.81 | 7.05 | 187 | 285 | 41 |
| 1990 <u>4/</u> | 10.30 | 0.25 | 17.15 | 7.65 | 190 | 346 | 44 |

TABLE 12

INDONESIA: MEAT, MILK, AND EGG PRODUCTION
(1,000 MT)

| <u>Year</u> | <u>Beef 5/</u> | <u>Mutton 6/</u> | <u>Pork</u> | <u>Poultry</u> | <u>Milk</u> | <u>Hen Eggs</u> |
|----------------|----------------|------------------|-------------|----------------|-------------|---------------------|
| 1984 | 265 | 77 | 119 | 280 | 179 | 273 |
| 1985 | 276 | 79 | 133 | 318 | 192 | 292 |
| 1986 | 277 | 94 | 164 | 343 | 220 | 321 |
| 1987 | 280 | 94 | 141 | 382 | 235 | 330 |
| 1988 <u>2/</u> | 288 | 93 | 142 | 403 | 265 | 352 |
| 1989 <u>3/</u> | 296 | 95 | 145 | 425 | 300 | 369 |
| 1990 <u>4/</u> | 304 | 97 | 148 | 448 | 340 | 386 |

1/ Does not include buffalo. 2/ Revised figures. 3/ Estimated figures. 4/ Office of Agricultural Affairs estimate. 5/ Includes buffalo meat. 6/ Includes goats.

Source: Directorate General for Livestock

WORLD PINEAPPLE PRODUCTION

World pineapple production during 1991 is forecast at 4.7 million tons, essentially unchanged from 1990. Output in Thailand and the Philippines, the two largest producers, is forecast to be about the same as 1990. Pineapple production in Africa is forecast to be about 6 percent above the 1990 level as planted area increased after last year's downturn.

A fourth year of dry weather in the Philippines has caused the pineapple estimate to remain at 1.15 million tons. Output in 1990 was 1.16 million tons, down from a peak of 1.3 million reached in 1987. The effect of the dry weather has been compounded by higher costs for fertilizers and other production related chemicals. It should be noted that efforts by the Philippine government to validate its statistical information on pineapples resulted in a significant downward revision in the production series for all years since 1980.

In Thailand, pineapple production is estimated at 1.5 million tons. Little rainfall since November 1990 is affecting the early 1991, crop, resulting in lower-than-normal yields and an increased number of small fruit. Thai pineapple production normally fluctuates between 1.4 million and 1.9 million tons as a result of weather and domestic prices. Prices are currently reported to be the highest in decades but the weather problems are likely to keep yields below the reduced levels of 1990. Thai farmers are reported to be using various techniques to move their harvest outside the normal April-May and October-November harvesting periods. Canneries are willing to pay higher prices for these "offseason" deliveries.

Taiwan's 1991 production is forecast at 240,000 tons, 3-percent above 1990. Prices are generally favorable as the domestic market for fresh pineapple continues to expand. Following a 3 percent decline in 1990, Malaysian pineapple production is forecast at 225,000 tons in 1991 a 7 percent increase. Both area and yield are expected to be higher. In addition, a more favorable outlook for exports to Japan has created optimism in the industry and the Malaysian Government is now looking at the possibility of expanding pineapple cultivation to other areas of the country.

Pineapple production in Cote d'Ivoire increased in 1990 and is forecast to increase again in 1991. The industry seems to have fully adjusted to the breakup of the country's sole pineapple cooperative, COFRUITEL, in 1986. That breakup and consequent loss of credit facilities forced many small producers to leave the industry. The increasing domination of the industry by large producers is expected to lead to increased quality and productivity and increased stability of production. After declining in 1990, Kenya's pineapple production is set for a major recovery in 1991. Favorable weather during the growing season is expected to result in higher yields. In addition, a trend in the industry to replant after the first ratoon crop rather than the second has tended to raise the national yield. South African production is forecast at 210,000 tons in 1991, 7 percent above 1990 when drought and poor prices hurt the crop.

Australian output in 1991 is forecast at 155,000 tons, 9 percent above the 1990 crop. Weather patterns in 1990 caused too much of the crop to ripen at the same time with the result that a portion of the crop was left to rot in the fields and another portion was rejected by the processing plant because it was overripe.

Mexico's pineapple crop is forecast at 333,000 tons, slightly above last year. Small growers in Mexico are facing a financial squeeze as sources of credit become less available and production costs continue to rise. Some sources claim that credit availability for small farmers is down over 50 percent as compared to 1990. Pineapple production in the United States is tentatively forecast to decline again as a significant block of pineapple land is converted to nonagricultural uses.

Arthur Coffing/Bernadine Baker (202) 382-8891

TABLE 13

FRESH PINEAPPLE: PRODUCTION IN SELECTED COUNTRIES
(1,000 metric tons)

| Year | Australia | Cote d'Ivoire | Kenya | Malaysia | Mexico | Philippines | South Africa | Taiwan | Thailand | Total Foreign | United States | TOTAL |
|---------|-----------|---------------|-------|----------|--------|-------------|--------------|--------|----------|---------------|---------------|---------|
| : | : | : | : | : | : | : | : | : | : | : | : | : |
| 1970 | 128.0 | 110.6 | | 283.2 | 248.8 | 365.0 | 160.5 | 338.2 | 242.5 | 1,876.9 | 865.5 | 2,742.3 |
| 1971 | 128.0 | 135.7 | | 268.2 | 297.3 | 380.0 | 173.5 | 358.5 | 124.8 | 1,866.1 | 854.6 | 2,720.7 |
| 1972 | 126.0 | 201.3 | | 255.4 | 218.2 | 375.0 | 174.0 | 334.4 | 318.8 | 2,003.1 | 859.1 | 2,862.2 |
| 1973 | 126.0 | 201.0 | | 241.5 | 268.3 | 333.2 | 147.4 | 328.0 | 483.5 | 2,128.9 | 734.8 | 2,863.8 |
| 1974 | 119.8 | 229.0 | | 245.3 | 397.8 | 405.0 | 184.2 | 307.9 | 803.7 | 2,692.7 | 635.0 | 3,327.7 |
| 1975 | 95.5 | 240.0 | | 199.3 | 371.3 | 400.0 | 169.4 | 319.0 | 1,151.9 | 2,946.3 | 653.2 | 3,599.4 |
| 1976 | 119.0 | 267.0 | | 194.4 | 442.0 | 752.0 | 172.3 | 278.8 | 1,295.9 | 3,521.4 | 616.9 | 4,138.3 |
| 1977 | 101.0 | 242.0 | | 191.8 | 510.0 | 780.0 | 158.8 | 282.2 | 1,499.4 | 3,765.3 | 626.0 | 4,391.2 |
| 1978 | 103.0 | 312.0 | | 190.3 | 568.3 | 815.0 | 167.3 | 249.6 | 1,540.0 | 3,945.6 | 612.4 | 4,557.9 |
| 1979 | 133.0 | 287.0 | | 192.6 | 632.1 | 875.0 | 212.1 | 244.8 | 1,372.0 | 3,948.6 | 617.8 | 4,566.4 |
| 1980 | 123.3 | 303.0 | | 176.1 | 604.6 | 901.0 | 221.9 | 228.8 | 1,673.0 | 4,231.7 | 596.0 | 4,827.7 |
| 1981 | 123.4 | 306.7 | | 153.6 | 550.0 | 972.5 | 242.7 | 181.0 | 1,824.1 | 4,354.0 | 577.0 | 4,931.0 |
| 1982 | 125.5 | 233.4 | | 188.3 | 440.0 | 1,009.8 | 244.1 | 144.9 | 1,439.3 | 3,825.2 | 607.8 | 4,433.1 |
| 1983 | 111.3 | 181.5 | | 183.4 | 250.0 | 967.0 | 209.6 | 115.2 | 1,465.8 | 3,483.7 | 655.0 | 4,138.7 |
| 1984 | 115.1 | 227.6 | 168.0 | 174.5 | 260.0 | 1,035.7 | 184.3 | 123.6 | 1,472.5 | 3,761.3 | 544.3 | 4,305.6 |
| 1985 | 124.5 | 294.8 | 167.0 | 182.4 | 325.0 | 1,030.0 | 247.6 | 149.7 | 1,768.9 | 4,289.9 | 512.6 | 4,802.5 |
| 1986 | 155.0 | 280.5 | 231.3 | 174.1 | 292.5 | 1,273.2 | 247.9 | 157.9 | 1,635.7 | 4,448.1 | 586.0 | 5,034.1 |
| 1987 | 165.0 | 269.1 | 210.0 | 178.5 | 306.0 | 1,303.4 | 267.4 | 193.3 | 1,510.0 | 4,402.7 | 627.8 | 5,030.4 |
| 1988 | 168.3 | 216.4 | 190.5 | 194.5 | 247.5 | 1,181.2 | 264.8 | 228.1 | 1,690.5 | 4,381.9 | 597.8 | 4,979.7 |
| 1989 | 146.0 | 187.7 | 212.3 | 216.1 | 324.0 | 1,178.8 | 262.2 | 230.7 | 1,732.0 | 4,489.9 | 526.2 | 5,016.1 |
| 1990 | 142.0 | 193.3 | 202.4 | 209.8 | 328.0 | 1,156.0 | 196.5 | 233.5 | 1,512.0 | 4,173.5 | 521.6 | 4,695.1 |
| 1991 1/ | 155.0 | 199.0 | 221.3 | 225.0 | 333.0 | 1,150.0 | 209.7 | 240.0 | 1,500.0 | 4,233.0 | 450.0 | 4,683.0 |

1/ Preliminary.

APRIL 1991

PRODUCTION ESTIMATES AND CROP ASSESSMENT DIVISION, FAS, USDA

WORLD FLAXSEED PRODUCTION

World flaxseed production for 1990/91 is estimated at 2.3 million tons, up 476,000 tons or 26 percent from 1989/90. The majority of this increase was due to the larger area and favorable growing conditions in Canada, where flaxseed production was up 88 percent from last year to 935,000 tons. Four countries account for 85 percent of the total world flaxseed output. They are Canada, Argentina, India, and the Soviet Union. The United States, once a major flaxseed producer, now accounts for only 4 percent of world production. Canada, more than any other country, is responsible for significant swings in global flaxseed supplies from year to year. Producers are fortunate to have alternative crops such as wheat and rapeseed to plant in response to market prices. As shown in the table below, Canada produced 40 percent of the world's flaxseed in 1990/91, followed by Argentina, India, and the Soviet Union.

COMPARATIVE FLAXSEED PRODUCTION
OF MAJOR PRODUCERS 1975/76 AND 1990/91

| Country | 1975/76 | | 1990/91 | |
|---------------|-----------------------|---------|-----------------------|---------|
| | Production (1,000) | Percent | Production (1,000) | Percent |
| Canada | 445 | 18.1 | 935 | 40.1 |
| Argentina | 377 | 15.3 | 480 | 20.6 |
| India | 598 | 24.3 | 400 | 17.2 |
| Soviet Union | 340 | 13.8 | 165 | 7.1 |
| United States | 395 | 16.1 | 97 | 4.2 |
| EC-12 | 45 | 1.8 | 95 | 4.1 |
| Others | 257 | 10.6 | 157 | 6.7 |
| Total | 2,457 | 100.0 | 2,329 | 100.0 |

Production of flaxseed in Argentina, the second largest producer at 480,000 tons in 1990/91, was down 7 percent from 1989/90. Argentina, like Canada, produces flaxseed for both export and domestic utilization. The 1990/91 crop was down due to a return to average yields from last year's near record. Flaxseed area and production has been trending downward at a very modest rate in Argentina during the 1980's and could be characterized as relatively stable since 1985.

Reports from U.S. agricultural attaches stationed at U.S. embassies in the major flaxseed producing countries indicate that area planted for the 1991/92 crop will not change significantly from 1990/91. The USDA will release the initial flaxseed production forecast for 1991/92 in July, along with other oilseed forecasts.

Rod Paschal, (202) 382-8881

TABLE 14

World Flaxseed Harvested Area

| | 75/76 | 76/77 | 77/78 | 78/79 | 79/80 | 80/81 | 81/82 | 82/83 | 83/84 | 84/85 | 85/86 | 86/87 | 87/88 | 88/89 | 89/90 | 90/91(f) |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <i>Countries Sorted by 1,000's of Hectares in 1990/91.</i> | | | | | | | | | | | | | | | | |
| India | 2,119 | 1,888 | 2,010 | 2,092 | 1,614 | 1,673 | 1,820 | 1,404 | 1,487 | 1,395 | 1,420 | 1,155 | 1,151 | 1,199 | 1,180 | 1,200 |
| Soviet Union | 1,403 | 1,361 | 1,362 | 1,339 | 1,212 | 1,266 | 1,057 | 1,126 | 1,173 | 1,159 | 1,100 | 1,053 | 1,069 | 1,039 | 871 | 782 |
| Canada | 567 | 324 | 596 | 526 | 931 | 554 | 466 | 631 | 431 | 720 | 740 | 755 | 591 | 501 | 598 | 725 |
| Argentina | 446 | 674 | 884 | 817 | 978 | 726 | 740 | 864 | 770 | 732 | 688 | 745 | 655 | 535 | 575 | 575 |
| United States | 611 | 386 | 501 | 278 | 355 | 268 | 234 | 297 | 235 | 218 | 236 | 276 | 187 | 91 | 66 | 102 |
| EC-12 | 43 | 62 | 72 | 76 | 68 | 62 | 44 | 52 | 51 | 62 | 78 | 64 | 70 | 83 | 96 | 103 |
| France | 26 | 43 | 46 | 54 | 50 | 46 | 30 | 38 | 39 | 47 | 53 | 41 | 47 | 52 | 57 | 55 |
| United Kingdom | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9 | 11 | 8 | 14 | 18 | 26 |
| Belg-Lux | 9 | 9 | 10 | 7 | 7 | 7 | 6 | 9 | 7 | 10 | 11 | 8 | 10 | 11 | 12 | 11 |
| Netherlands | 5 | 5 | 6 | 5 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 8 | 10 |
| Italy | 3 | 5 | 10 | 10 | 7 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Romania | 83 | 85 | 80 | 75 | 84 | 82 | 83 | 80 | 75 | 50 | 77 | 75 | 75 | 70 | 75 | 75 |
| Bangladesh | 14 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 75 | 66 | 71 | 70 |
| Poland | 79 | 87 | 62 | 84 | 101 | 82 | 59 | 48 | 44 | 43 | 39 | 30 | 28 | 30 | 37 | 40 |
| Czechoslovakia | 31 | 30 | 33 | 33 | 30 | 31 | 29 | 28 | 30 | 31 | 30 | 30 | 30 | 30 | 30 | 30 |
| Egypt | 20 | 25 | 25 | 25 | 29 | 22 | 16 | 32 | 13 | 12 | 18 | 15 | 15 | 15 | 17 | 17 |
| Pakistan | 9 | 8 | 10 | 13 | 10 | 11 | 11 | 8 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 |
| Turkey | 13 | 12 | 9 | 5 | 8 | 9 | 8 | 2 | 5 | 8 | 10 | 7 | 8 | 8 | 8 | 8 |
| Hungary | 19 | 19 | 20 | 20 | 15 | 9 | 9 | 9 | 9 | 9 | 6 | 6 | 6 | 6 | 6 | 6 |
| Australia | 16 | 15 | 44 | 13 | 17 | 10 | 7 | 5 | 5 | 6 | 10 | 8 | 8 | 3 | 2 | 4 |
| Uruguay | 103 | 74 | 79 | 61 | 98 | 36 | 10 | 13 | 13 | 10 | 8 | 4 | 1 | 4 | 4 | 4 |
| Iran | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Mexico | 19 | 12 | 12 | 11 | 8 | 6 | 10 | 1 | 9 | 9 | 3 | 3 | 3 | 3 | 3 | 3 |
| World Total | 5,598 | 5,080 | 5,817 | 5,486 | 5,576 | 4,865 | 4,621 | 4,618 | 4,377 | 4,491 | 4,491 | 4,254 | 3,985 | 3,696 | 3,652 | 3,757 |

Source: Production Estimates & Crop Assessment Division, FAS, USDA

Note: (f) denotes preliminary estimates or forecasts.

April 1991

TABLE 15

World Flaxseed Yields

| | 75/76 | 76/77 | 77/78 | 78/79 | 79/80 | 80/81 | 81/82 | 82/83 | 83/84 | 84/85 | 85/86 | 86/87 | 87/88 | 88/89 | 89/90 | 90/91(f) |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <i>Countries Sorted by Metric Tons per Hectare in 1990/91.</i> | | | | | | | | | | | | | | | | |
| United Kingdom | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.78 | 0.73 | 1.25 | 1.86 | 1.67 | 1.77 |
| Egypt | 1.20 | 1.20 | 1.20 | 1.24 | 1.17 | 1.23 | 1.13 | 1.19 | 1.23 | 1.67 | 1.22 | 1.27 | 1.27 | 1.27 | 1.35 | 1.29 |
| Canada | 0.79 | 0.86 | 1.10 | 1.09 | 0.88 | 0.80 | 1.00 | 1.19 | 1.03 | 0.96 | 1.22 | 1.36 | 1.23 | 0.75 | 0.83 | 1.29 |
| Australia | 0.75 | 1.13 | 0.64 | 1.00 | 0.82 | 0.70 | 0.86 | 0.60 | 0.80 | 1.00 | 1.20 | 1.13 | 1.00 | 2.33 | 1.00 | 1.25 |
| Hungary | 0.95 | 0.90 | 0.45 | 0.60 | 0.60 | 1.11 | 1.22 | 1.22 | 1.22 | 1.00 | 1.17 | 1.00 | 1.17 | 1.17 | 1.17 | 1.17 |
| Italy | 0.67 | 0.80 | 0.60 | 0.30 | 0.43 | 0.60 | 0.60 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Iran | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Netherlands | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.33 | 1.00 | 0.75 | 1.00 | 1.00 | 1.67 | 1.25 | 1.00 | 1.25 | 1.00 |
| Mexico | 1.42 | 0.67 | 1.50 | 1.36 | 1.25 | 1.33 | 1.20 | 1.00 | 1.11 | 1.11 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| United States | 0.65 | 0.50 | 0.73 | 0.79 | 0.86 | 0.73 | 0.79 | 0.88 | 0.75 | 0.82 | 0.89 | 1.06 | 1.01 | 0.45 | 0.47 | 0.95 |
| Argentina | 0.85 | 0.92 | 0.92 | 0.73 | 0.76 | 0.84 | 0.81 | 0.89 | 0.86 | 0.86 | 0.67 | 0.84 | 0.82 | 0.86 | 0.90 | 0.84 |
| Uruguay | 0.60 | 0.62 | 0.51 | 0.51 | 0.66 | 0.58 | 0.60 | 0.69 | 0.69 | 0.70 | 0.75 | 0.75 | 1.00 | 0.75 | 0.75 | 0.75 |
| Belg-Lux | 0.67 | 0.89 | 0.70 | 1.00 | 1.00 | 0.86 | 0.83 | 0.78 | 0.86 | 0.80 | 0.73 | 0.75 | 0.80 | 0.73 | 0.58 | 0.73 |
| Pakistan | 0.44 | 0.50 | 0.60 | 0.54 | 0.60 | 0.64 | 0.64 | 0.75 | 0.56 | 0.56 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| Bangladesh | 0.50 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | 0.55 | 0.54 | 0.57 |
| France | 1.23 | 0.84 | 0.94 | 0.57 | 0.84 | 0.76 | 0.60 | 0.82 | 0.56 | 0.62 | 0.64 | 0.59 | 0.47 | 0.60 | 0.56 | 0.55 |
| Czechoslovakia | 0.36 | 0.33 | 0.33 | 0.30 | 0.40 | 0.48 | 0.41 | 0.54 | 0.50 | 0.48 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Turkey | 0.62 | 0.58 | 0.67 | 0.60 | 0.38 | 0.33 | 0.25 | 0.50 | 0.40 | 0.38 | 0.50 | 0.57 | 0.50 | 0.50 | 0.50 | 0.50 |
| Romania | 0.54 | 0.59 | 0.53 | 0.81 | 0.56 | 0.54 | 0.46 | 0.54 | 0.31 | 0.70 | 0.47 | 0.43 | 0.44 | 0.43 | 0.51 | 0.43 |
| Poland | 0.46 | 0.56 | 0.61 | 0.62 | 0.35 | 0.35 | 0.41 | 0.35 | 0.43 | 0.42 | 0.46 | 0.50 | 0.39 | 0.50 | 0.46 | 0.43 |
| India | 0.28 | 0.22 | 0.26 | 0.26 | 0.17 | 0.25 | 0.27 | 0.27 | 0.30 | 0.28 | 0.27 | 0.27 | 0.34 | 0.30 | 0.29 | 0.33 |
| Soviet Union | 0.24 | 0.25 | 0.22 | 0.19 | 0.21 | 0.16 | 0.16 | 0.13 | 0.22 | 0.21 | 0.18 | 0.22 | 0.21 | 0.21 | 0.26 | 0.21 |
| World Average | 0.44 | 0.42 | 0.51 | 0.45 | 0.48 | 0.43 | 0.45 | 0.54 | 0.49 | 0.52 | 0.52 | 0.62 | 0.57 | 0.45 | 0.51 | 0.62 |

Source: Production Estimates & Crop Assessment Division, FAS, USDA

Note: (f) denotes preliminary estimates or forecasts.

April 1991

World Flaxseed Production

| | 75/76 | 76/77 | 77/78 | 78/79 | 79/80 | 80/81 | 81/82 | 82/83 | 83/84 | 84/85 | 85/86 | 86/87 | 87/88 | 88/89 | 89/90 | 90/91(f) |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <i>Countries Sorted by 1,000's of Metric Tons in 1990/91.</i> | | | | | | | | | | | | | | | | |
| Canada | 445 | 277 | 653 | 572 | 815 | 442 | 468 | 752 | 444 | 694 | 902 | 1,026 | 729 | 373 | 498 | 935 |
| Argentina | 377 | 617 | 810 | 600 | 743 | 610 | 600 | 765 | 660 | 626 | 460 | 622 | 535 | 460 | 516 | 480 |
| India | 598 | 419 | 527 | 535 | 269 | 423 | 483 | 375 | 444 | 389 | 380 | 317 | 393 | 361 | 342 | 400 |
| Soviet Union | 340 | 337 | 300 | 250 | 254 | 196 | 165 | 150 | 259 | 248 | 201 | 233 | 228 | 220 | 227 | 165 |
| United States | 395 | 193 | 363 | 219 | 305 | 196 | 185 | 261 | 175 | 178 | 211 | 293 | 189 | 41 | 31 | 97 |
| EC-12 | 45 | 53 | 62 | 46 | 56 | 48 | 30 | 43 | 32 | 42 | 54 | 44 | 46 | 71 | 80 | 95 |
| United Kingdom | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7 | 8 | 10 | 26 | 30 | 46 |
| France | 32 | 36 | 43 | 31 | 42 | 35 | 18 | 31 | 22 | 29 | 34 | 24 | 22 | 31 | 32 | 30 |
| Netherlands | 5 | 5 | 6 | 5 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 5 | 5 | 5 | 10 | 10 |
| Belg-Lux | 6 | 8 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 8 | 8 | 6 | 8 | 8 | 7 | 8 |
| Italy | 2 | 4 | 6 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Bangladesh | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 40 | 36 | 38 | 40 |
| Romania | 45 | 50 | 42 | 61 | 47 | 44 | 38 | 43 | 23 | 35 | 36 | 32 | 33 | 30 | 38 | 32 |
| Egypt | 24 | 30 | 30 | 31 | 34 | 27 | 18 | 38 | 16 | 20 | 22 | 19 | 19 | 19 | 23 | 22 |
| Poland | 36 | 49 | 38 | 52 | 35 | 29 | 24 | 17 | 19 | 18 | 18 | 15 | 11 | 15 | 17 | 17 |
| Czechoslovakia | 11 | 10 | 11 | 10 | 12 | 15 | 12 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| Hungary | 18 | 17 | 9 | 12 | 9 | 10 | 11 | 11 | 11 | 9 | 7 | 6 | 7 | 7 | 7 | 7 |
| Pakistan | 4 | 4 | 6 | 7 | 6 | 7 | 7 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 |
| Australia | 12 | 17 | 28 | 13 | 14 | 7 | 6 | 3 | 4 | 6 | 12 | 9 | 8 | 7 | 2 | 5 |
| Turkey | 8 | 7 | 6 | 3 | 3 | 3 | 2 | 1 | 2 | 3 | 5 | 4 | 4 | 4 | 4 | 4 |
| Mexico | 27 | 8 | 18 | 15 | 10 | 8 | 12 | 1 | 10 | 10 | 4 | 3 | 3 | 3 | 3 | 3 |
| Uruguay | 62 | 46 | 40 | 31 | 65 | 21 | 6 | 9 | 9 | 7 | 6 | 3 | 1 | 3 | 3 | 3 |
| Iran | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| World Total | 2,457 | 2,144 | 2,953 | 2,467 | 2,687 | 2,096 | 2,078 | 2,501 | 2,139 | 2,316 | 2,350 | 2,658 | 2,270 | 1,674 | 1,853 | 2,329 |

Source: Production Estimates & Crop Assessment Division, FAS, USDA

Note: (f) denotes preliminary estimates or forecasts.

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